Lectures
ON
DYSPNŒA.

Delivered at the Royal College of Physicians,

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LECTURE II.

What is dyspnœa? Phenomena of the simplest example of it. Dyspnœal distress varies as its remediability by effort. How the normal conditions of respiration are modified in dyspnœa. Modifications of range of movement; of length of interval; of ratio of parts of act; of active moving powers; and of sensation. Laws of disturbances of breath-elements.

Dyspnœa—what is it? How shall we define it? Do we mean by it distressing, painful breathing? Or need it be only laborious and violent? Or must it be both? For although the two are generally united, we may have painful breathing without any labour or violence, and laborious breathing without any distress. I think either may be called *dyspnœa;* for the meaning of the Greek δυς, answering to the Latin *difficilis*, is not the same as our "difficult"; it has a wider, more generic signification, and indicates merely something wrong or defective, something abnormal, in that to which it is applied.

Let us now take a given case of dyspnœa, and let us analyse it, and see in what way those five characteristic circumstances of healthy breathing that I have mentioned are modified; and let us suppose the simplest case of pure uncomplicated dyspnœa that we can imagine—the dyspnœa of violent exercise in a healthy person. Suppose, then, a man has run a mile to catch the train; he arrives just too late, and sits down in the waiting-room to recover his breath: if we carefully examine his respiration what shall we find? In what does his dyspnœa consist?

There is, in the first place, a particular sensation present, an intense feeling of want of breath, that forces on him a violent, panting, rapid respiration; it is imperious, he cannot resist it, it drives him to such violent breathing that he is unable perhaps even to speak, he cannot spare a particle of breath for any purpose except the relief of this irresistible sensation. This feeling, the *besoin de respirer* of the French, so difficult to describe, but with which we are all so familiar, is the first link in the chain, the cause of all the other phenomena of dyspnœa, and its intensity may be measured by their violence. I believe it to be, as I said just now, the same in kind as the ordinary feeling that prompts to a natural tranquil inspiration, but so aggravated, so intense, as to give rise to results altogether dissimilar, and to seem to a superficial observer quite a superadded and distinct sensation. If, however, we hold our breath and watch our own sensations, I think we shall find that it is merely an accumulation of the primary feeling; first, it *suggests*, then it *commands*, and then it *compels* to breathe. It is, however, a very difficult subject to form a correct opinion on. Moreover, it would be very difficult to define what the feeling is: it seems to consist partly in a bursting feeling in the chest, a choking sense of fulness in the throat, a feeling of fulness in the head and scrobiculus cordis, and a peculiar sensation beneath the sternum something like a sense of heat. Of its cause there can be no doubt. It evidently depends on a condition of arrears in the lungs, the presence of imperfectly decarbonized blood in them, and the capillary congestion therefrom resulting. This disturbance of vascular balance, this temporary capillary arrest, at once gives notice of its existence by this peculiar sensation, probably through the intervention of the pneumogastric nerve, and the sensation at once induces the appropriate respiratory efforts by the efferent nerves—the phrenics, intercostals, external respiratory, &c. Thus we see that the muscular phenomena of dyspnœa are of the same reflex character as those of ordinary breathing, and that the segment of the nervous centres engaged in this reflexion is the same—the medulla oblongata and the upper part of the spinal cord; and, further, that it seems to belong to that class of reflex actions in which a certain *sensation* forms an essential link in the chain, as we see, for example, in faucial deglutition. Dyspnœa, then, as contrasted with ordinary breathing, appears to be merely an example of increase of action from increase of stimulus.

There are one or two curious things about this sense of dyspnœa which I have observed. Under the influence of overwhelming emotion it seems to be entirely lost. If the breathing of persons suffering from intense grief is watched, it will be seen that they breathe at very long intervals—that their chest will remain for some time in a state of perfect quiescence, as if they were never going to breathe again—that their respiration consists of a succession of distant sighs, the intervals between them being quite regular, and each respiration a separate and voluntary act, and the time at which it shall be effected a matter of choice. And this is really the case: all necessity of breathing, all sense of dyspnœa on suspending the breath for an indefinite period, is lost. I have been told by those who have described it to me, that they felt as if they never should, and never should want to, breathe again; that after the suspension of the breathing for some time they became alarmed at themselves, and voluntarily breathed, fearing the consequences of longer suspending it. I have watched such breathing more than once, and I think I am not exaggerating when I say that I have seen an interval of half a minute between the sighing respirations, without, apparently, the slightest distress. I have observed the same kind of breathing in cases of extreme exhaustion, and accompanying nervous headache.

Another thing I have noticed is that the amount of dyspnœa, at least of the sense of dyspnœa, is not proportionate to the amount of injury inflicted on the respiratory organs and the imperfection with which respiration is performed, but that the dyspnœa produced by some causes is much more intense and distressing than that produced by others; that a large amount of injury of one kind will produce much less respiratory distress, less violent and agonizing efforts, than a small amount of another; that pneumonic consolidation of the lung, for instance, to an extent that shall prove speedily fatal, will produce less urgent and distressful dyspnœa than a degree of asthmatic contraction of the bronchial tubes that may be borne with impunity for weeks. A patient with phthisis may not have a quarter of his lungs at his command for the purposes of respiration, but his dyspnœa will be nothing compared to that of an asthmatic. And I think in this tendency of different forms of lung-injury to produce different and altogether disproportionate amounts of dyspnœa, I have detected this curious law: that the amount of the sense of dyspnœa produced does not depend upon the amount of injury inflicted, but on the remediability of the abnormal condition by those violent respiratory efforts that the sense of dyspnœa engenders. A man who has one lung consolidated is not placed under better circumstances by any amount of respiratory effort; it cannot make his solidified lung do *any* work, and the respiratory power of his breathing, pervious lung it can but increase in the slightest degree. The respiratory distress, therefore, that would be useless, is not induced, and we see him lying on his back, breathing short it is true, but with tolerable tranquillity: there is no violence, no agonizing urgency, no starting and straining of the muscles. How different the condition when the source of the dyspnœa is such as violent respiratory efforts may remedy! Take asthma, for example, where the lung-structure—the actual seat of the respiratory changes—is healthy, but where the difficulty is in getting the air to and from it through the constricted air-tubes. Here the amount of air supplied to the lungs, and consequently the amount of respiration actually effected, will be in exact proportion to the amount of extraordinary effort with which the air is drawn and driven through the narrow tubes; for rapidity of stream may in some degree compensate for its tenuity. And see how violent these extraordinary efforts are: watch the asthmatic labouring for his breath; looked at his raised shoulders, his fixed head, his respiratory muscles contracted as tight as cords, and recognise in the expression of his face the agony of the sensation that compels such effort. I think, then, that that source of dyspnœa will produce the greatest distress which can be the most remedied and bettered by violent respiration; in other words, that the further the mischief is removed from the ultimate lung-substance the greater the dyspnœa—that the dyspnœa of asthma is greater than that of pneumonia, of laryngitis than asthma; and I think that anyone who has watched the expression of countenance and the action of the diaphragm and sterno-mastoids in laryngeal narrowing will be inclined to agree with me.

But to return to our belated traveller whom we left panting in the waiting-room. If we watch his breathing we shall see that, besides this particular sensation of which he himself alone is conscious, it presents many points of divergence from the normal standard of respiration; that the muscular phenomena present an exaltation proportionate to the exaltation of the sensation that gives rise to them; that the length of the respiratory interval, the range of movement, the proportion of the different parts of the act of respiration, and the agency employed, are all modified.

In the first place, he *breathes short*—the length of the respiratory interval is diminished; instead of performing sixteen or eighteen respirations a minute, he performs from forty to sixty, and this increased rapidity of breathing depends chiefly, as we shall see presently, on a shortening or suppression of certain parts of the respiratory act.

In the second place, the range of movement is increased—he *breathes deep;* instead of the hardly perceptible elevation of the ribs and sternum that we see in tranquil breathing, the chest is violently distended at each inspiration with a strong heaving action; if the dyspnœa is very great, the shoulders are raised and the head slightly thrown back every time the breath is drawn in, and if any part of the dress is tight it is unfastened to give more room for the play of the ribs. The result of this extended range of respiratory movement is, that three or four times the usual amount of air is breathed at each respiration.

In the third place, the relative proportion of the three stages of a complete respiratory act—inspiration, expiration, and rest—is lost. The post-expiratory rest is altogether suppressed; the moment the air is driven from the chest by expiration a fresh relay is demanded, there is no time to spare for a state of quiescence, the exigencies of the case do not permit this lost time; the commencement of the inspiration, therefore, starts immediately from the termination of the expiration without the intervention of any pause whatever; thus the whole of the time of the respiratory interval is devoted to respiratory action. But not only is one of the stages of normal respiration thus wiped out, but the absolute and relative length of the two that remain is changed; both are shortened, but inspiration vastly more than expiration, so that, instead of the one being twice as long as the other, they are of about equal length—that is, the expiration is *somewhat* shortened, and the inspiration so greatly so that it takes no more time than the expiration. In tranquil breathing the muscular effort of inspiration is so slight (being in proportion to the exigency it has to satisfy) that it is some time in overcoming the elasticity of the parietes and the contractility of the lungs, both of which oppose the enlarging of the chest; but the muscular exertion employed in the violent breathing succeeding exercise is so great that the opposing forces are quite unequal to antagonize or impede it, and yield instantly to it as if they did not exist. Thus inspiration is instantaneously effected, as instantaneously as expiration, which has nothing to oppose it but the friction of the air in the tubes. The deliberate and characteristic rhythm of tranquil breathing is thus lost, and is converted into a rapid see-saw.

In the fourth place, the active moving powers are altered. Of inspiration, *not.* The moving power of inspiration in natural breathing is muscular; in the dyspnœa of exertion it is also muscular. But the natural moving power of expiration has been supplanted by a fresh one: it is no longer mainly elastic; it has become, like inspiration, muscular. The air is forced out, as it has just been drawn in, by muscular effort: the expiratory muscles drive it forth, as the inspiratory have just drawn it in. The result of this superaddition of muscular force to the resiliency of the lungs and parietes is, that expiration is performed in a shorter time; and this shortening of expiration is the very object of this accessory force being called in. The ordinary passive recoil of lungs and chest-walls, when released from the action of the inspiratory muscles, would not drive the air forth quick enough to satisfy the respiratory exigencies which the exercise has created; muscular force, therefore, comes in to help it, and pumps the air out in half the time. Thus, with regard to the *motive power*, there is a change in the dyspnœa of exercise, both at inspiration and expiration: at inspiration a quantitative change merely, more force of the same nature; at expiration a qualitative change, one force being supplanted, or rather supplemented, by another.

We see, then, that in this simplest exhibition of dyspnœa—that which consists in a mere increased activity of the function in organs perfectly healthy—every one of the five conditions of normal breathing is changed: the range of movement, the length of respiratory interval, the ratio of its parts, the active moving powers, and the sensation.

But these changes do not always coexist in the same way as in the instance which I have cited; nor where they do coexist have they the same relation and proportion to one another. In some forms of perturbed respiration we find one of the conditions of normal breathing modified, and in some another; in some only one, in some several; in some the change is in one direction, in some in the opposite; in some the variations from the regular standard are grouped in one way, in some in a very different one. And these peculiar departures from the normal standard of breathing are not irregular or uncertain, but are constant, and are always present in those forms of dyspnœa of which they are respectively characteristic, and bear an immediate and interesting relation to the particular way in which the dyspnœa in each case is brought about. One source of derangement of respiration will throw out one set of respiratory phenomena and leave the others unaffected; and what shall be thrown out, and what shall not, will depend entirely on the direction in which respiration is assailed. Thus a disturbance of the machinery of respiration of one kind will especially affect the amount of movement; of another, the length of interval; of another, the ratio of parts of the act; and so on. To point out these interesting relations, to show what divergencies from the natural standard we get in one form of perturbed respiration and what in another, and thus how the varieties of dyspnœa may become diagnostic of their cause, is the principal purpose of these lectures.

Let me now, with the view of illustrating this point, direct attention to the accompanying table.

TABLE II.

MODES OF DISTURBANCES OF BREATH-ELEMENTS.

I. MOVEMENT MAY BE DISTURBED	
On the side of deficiency	*Pleurisy.*
,, ,, excess	*Exercise.*
II. LENGTH OF INTERVAL	
May be too short	*Almost all dyspnœas.*
,, too long	*Laryngitis.*
,, irregular	*Hysteria.*
III. RATIO OF PARTS OF ACT:	
Expiration may be prolonged	*Emphysema.*
Rest may be shortened or lost	*All dyspnœas whatever.*
IV. MOVING POWER:	
By displacement	*Peritonitis, pleurisy.*
,, substitution	*Asthma.*
,, transposition	*Any extreme dyspnœa.*
,, superaddition	*Ditto.*
V. SENSATION	
May be exalted	*Asthma, croup.*
,, defective	*Emotion.*

We see, in the first place, that movement may be disturbed in two ways—on the side of *deficiency*, and on the side of *excess*. We have a good example of deficient respiratory movement in pleurisy, where, from the pain to which free respiration gives rise, the muscles refuse to raise the parietes of the chest. The movement is so superficial and slight as hardly to be perceptible, and is often not sufficient to produce any respiratory sound; on listening over the affected side there is perfect silence instead of the natural respiratory murmur. What amount of air is changed at each respiration under these circumstances I cannot say, not having had an opportunity of estimating it in a case of pleurisy; but I should have no doubt that it often fell below half the normal quantity. In asthma, too, although there are the most violent efforts, there is very little real movement; the chest-walls are almost stationary, and the respiratory murmur often *nil*.

On the other hand, movement may be disturbed on the side of *excess*, as in the case of exercise; and this is the side on which it is disturbed in almost every form of dyspnœa. And for this reason, that as dyspnœa is always engendered by some impediment to the discharge of the function of respiration, or damage in its organs, it immediately suggests a wider range of movement as the most direct and efficient means of restoring the respiratory balance, either by antagonizing the impediment or enabling the uninjured portions of the lung to do double duty. The sequence of increased range of respiratory movement on any source of dyspnœa is inevitable; it is indeed physiological, and it may be said to take place in every case except where the source of dyspnœa is of such a nature as to forbid it.

The *length of interval* may be disturbed in three ways: it may be *too short*, *too long*, or *irregular*. In almost all disturb-

ances of respiration the breathing is too quick, and for just the same reason as the range of movement is too wide—in order to do more work in the same time, and so countervail as far as possible the disadvantage under which the function is labouring. If a man is making forty respirations in a minute, he is, of course, changing twice the quantity of air that he is if he makes only twenty respirations of equal depth in the same time. This beyond a doubt is the final cause of shortened respiratory interval, as its efficient cause is, I believe, and as I may have occasion to show, the state of the pulmonary capillary circulation (the quality of its blood and its state of physical balance) acting through the centripetal pulmonary nerves, and by means of that particular sensation to which I have called attention.

In some cases, however, the respiratory interval is too long. And as with regard to range of movement those dyspnœas in which breathing is superficial are those in which deep breathing is forbidden, so, with regard to the length of interval, those dyspnœas in which breathing is morbidly lengthened are those in which quick breathing is physically impossible. The great cause, in fact, of a respiratory interval unnaturally prolonged is such a narrowing of some part of the air-passages as makes it impossible to get sufficient air through them to complete a respiration in the given natural period. We see a good example of this in cases of laryngeal constriction, where the chink of the glottis is often so narrowed, and the thread of air drawn through it so slender, that it takes three or four times as long to get the normal quantity of air into the chest as would suffice for an ordinary inspiration. The same difficulty is of course felt at expiration; so that the respiratory interval is often twice as long as natural. I have in such cases, when the want of air has been agonizing, and the sufferer would have given anything to have breathed quickly, counted only seven respirations in a minute.

There is, however, I must not omit to mention, one form of prolonged respiratory interval in which there is no difficulty in the air-passages, but in which the lengthening out of the respiratory acts, and their infrequency, depend on a suspension of the *besoin de respirer*. We see this breathing, as I have already mentioned, in cases of overwhelming emotion, such as extreme grief. The breathing is converted into a succession of distant sighs, sometimes a quarter of a minute apart, with a suspension of all respiratory action—a state of absolute rest—in the intervals. As I shall have to speak of this form of breathing presently I will not say more of it here.

There is yet a third way in which the respiratory interval may be disturbed—it may be irregular. There may be the proper number of respirations in a minute, and yet at one time the breathing may be too quick, and at another too slow—at one time panting, and at another almost sighing. This kind of breathing is frequently met with in hysteria: indeed it is characteristic of all emotional states; and I have not unfrequently diagnosed hysteria on the very strength of it.

The *ratio of the parts of the act* (expiration, inspiration, and rest) is modified in two principal ways—by *prolongation of expiration*, and by *shortening* or *suppression of the post-expiratory rest*. The former, the prolongation of expiration, is seen under two circumstances—1, when there is any impairment of the expiratory force (the resiliency of the lung); and, 2, when there is any impediment to the free ingress and egress of air. How the first kind of cause would act in prolonging expiration is quite manifest: the motive power of expiration being impaired, the act itself must necessarily be feebly and tedionsly performed. As long as the elastic contractility of the lung is retained, its tendency to assume a diminished volume is so strong that the air is instantaneously expelled as soon as the inspiratory forces have ceased to act. But when the lung has no longer a tendency to assume a diminished volume—when its contractility is gone—there is nothing to reduce the capacity of the thorax after inspiration has enlarged it, except the elasticity of the parietes. We see very good examples of this form of prolonged expiration where the contractility of the lung is destroyed by emphysematous inflation, or by infiltration with tubercle.

This form of prolonged expiration, and its *rationale*, have long been recognised; but I think the other form, due to impediment in the air-passages, has *not* been recognised. I think the tendency of impediment in the air-passages to prolong expiration, in excess of its action on inspiration, has been entirely overlooked. Of the fact there can be no doubt; and, though puzzled by it a long time, I think, now that I have hit upon it, that the explanation is simple and certain. What puzzled me was, that the impediment was of a nature to tell equally on inspiration and expiration; and that all evidence agrees in showing that the expiratory force is stronger than the inspiratory.* This being the case, one would think that the impediment would tend rather to prolong inspiration than expiration, as it would be the most quickly overcome at the time the stronger force is acting—i. e., at expiration. But this opinion rests on the fallacy that the strong expiratory power, that experiment has shown can be exerted in forced expiration, is actually exerted in ordinary breathing. Such, however, is not the case. There is every reason to believe that the muscular element of normal expiration is an extremely weak one, and that it is effected mainly, as I have already stated, by the gentle and immediate collapse of the chest-walls and lungs the moment they are liberated from the distending action of the inspiratory muscles. Since, then, the force of ordinary inspiration is a muscular force specially adapted to overcome constantly existing antagonizing forces, while the force of ordinary expiration is mainly elastic recoil to which nothing is opposed, and for which, therefore, no strength is required, any obstruction established in the air-passages, and telling equally both ways, would find to overcome it a strong inspiratory and a weak expiratory force, and would, of course, tell more on the weak than on the strong. Hence any obstruction in the air-passages, no matter what, no matter where, is always attended with a prolongation of expiration; a fact which has been entirely overlooked by auscultators, and which greatly invalidates the supposed diagnostic value of prolonged expiration.

And here I would insist on the importance of recognising the difference between prolonged expiration expressed by movement, and prolonged expiration expressed by sound. The greatest confusion prevails with regard to the use of the term "prolonged expiration": it is often used to signify nothing but unduly audible expiration, when really there is no prolongation of the expiratory act. Expiration sound that is unduly audible from the acquisition of any amount of bronchial character is always prolonged, always longer than the vesicular expiratory sound, although the collapse of the chest-wall—the expiratory *movement*—may be as short as natural. The cause of this (which I have explained elsewhere) is, that however short the collapse of the pulmonary parenchyma may be, the outward stream of air in the bronchial tubes, and therefore the bronchial sound, does not cease until the intra-thoracic air, compressed by the collapse of the chest, and the external atmosphere are *in equilibrio;* for when the vesicular collapse has ceased there is still an outward tide in the bronchial tubes, and the larger the tube, the nearer the orifice, the longer is it before this outward tide is brought to a standstill. Thus, in bronchial breathing the expiratory sound is always prolonged, although the expiratory movement may not be. We get the highest type of this prolonged expiratory tube-sound in the windpipe, where the expiration sound is always prolonged, let the collapse of the chest be ever so quick. What I mean by prolonged expiration is prolonged expiratory movement, or prolonged expiratory sound independent of bronchial character.

The other way in which the natural respiratory rhythm is modified is by the shortening, or suppression, of the post-expiratory rest, so that the inspiration starts at once from the termination of the preceding expiration—there is no pause. It simply means that there is no time to spare, and characterizes, therefore, every form of difficult breathing.

The *moving power* may be deranged in *four* ways—by *displacement*, by *substitution*, by *transposition*, and by *superaddition*. By displacement, when, instead of being distributed over the whole of the thoracic parietes, costal and diaphragmatic, it is accumulated on, and restricted to, either one or the other of these surfaces. Where breathing is entirely performed by the ribs, and there is no movement of the diaphragm, it is said to be *costal*, or *thoracic;* where the ribs are stationary, and the diaphragm alone moves, the breathing is said to be *diaphragmatic*, or *abdominal*. The former is seen in peritonitis, where the diaphragm refuses to descend; the latter in pleurisy, where the ribs refuse to rise.

Disturbance of the moving power by *substitution*—that is, where one force is substituted by another—is seen in the ex-

* Dr. Hutchinson ("Medico-Chirurgical Transactions," vol. xxix.) found, in 1500 observations, that the average greatest inspiratory power was equal to a column of mercury of 2·75 inches; while the expiratory force was equal to 3·97. Mendlessohn ("Der Mechanismus der Respiration") found that the force of the most powerful expiration was greater than that of the most powerful inspiration by about one inch of mercury. The most powerful expirations were, on an average, between 4·4 and 4·8 inches of mercury. Valentin arrived at a higher standard. He states that the strongest inspirations he obtained were equal to 5·6 inches of mercury, and the strongest expirations to 8 inches. But in these experiments expiration was made through the mouth, which gives the additional force of the muscles of the cheeks.

piration of any intense form of dyspnœa, as of asthma, where the elastic resiliency of the lung being no longer adequate to driving the air through the narrowed air-tubes, a muscular effort comes to its assistance towards the end of the expiration, and pumps the air out with a jerk. Elastic force has here been substituted (or supplemented) by muscular. I believe in all severe dyspnœas expiration becomes more or less muscular.

By *transposition* I mean the transposing the fixed and movable extremities of a muscle (or muscles) of respiration. By this means muscles that ordinarily have no respiratory power may be made to contribute to the respiratory movements. Any muscle, in fact, that is attached by one of its extremities to the head or spinal column, and by the other, mediately or immediately, to the ribs, may in this way become a respiratory muscle. Thus the *sterno-mastoid*, that is ordinarily a rotator (or, the two acting in conjunction, a forward flexor) of the head, becomes, by the head being fixed, an elevator of the sternum and clavicle. And this transposition (or rather its attempt) takes place even in muscles whose movable extremity is incapable of becoming fixed, and which cannot have, therefore, really imparted to them a respiratory action. They belong to the class that *can*—to the class that have a costal and a non-costal attachment; and therefore they are set in action along with the others. But since their non-costal extremity cannot be fixed, their contraction results in the movement of the part to which this is attached, and not in the movement of the ribs. And thus we see, in extreme dyspnœa, not only movements of the chest, but movements of the head and shoulders. A curious example of this is seen in the descent of the jaw that accompanies each inspiration in some dyspnœas—as, for example, in asthma. The true explanation of this is, I believe, as follows. All muscles passing down to the shoulders are muscles of extraordinary inspiration, and are called into action in violent dyspnœa, because, by elevating the shoulders, they enable the muscles passing down from them to the ribs to act with greater force. The omo-hyoid is such a muscle; in dyspnœa it therefore contracts at each inspiration. But unless the hyoid bone is fixed, the action of the muscle could only issue in drawing this down, and not in raising the shoulder. With the view, therefore, of fixing the upper attachment of the muscle, the elevators of the hyoid bone—*genio-hyoid*, *mylo-hyoid*, and *digastic*—contract at each inspiration; but the hyoid bone being held down by the omo-hyoid, these muscles, instead of elevating the bone, depress the jaw; hence the gaping movement at each inspiration.

By *superaddition* I mean the calling in for the performance of the respiratory act that vast array of muscles which we see in action in violent dyspnœa, but which are not used in ordinary breathing—in fact, superadding to the muscles of *ordinary* respiration the muscles of *extraordinary* respiration. Breathing can never become difficult without the muscles of natural breathing becoming supplemented by these exceptional muscles; the number of muscles so superadded, as well as the violence of their action, corresponding to the intensity of the dyspnœa.

Lastly, the *sensation* that regulates the respiratory movements may be *exalted* or *defective*. In every form of perturbed respiration that I am acquainted with, with one single exception, the *besoin de respirer* is exalted. It is the most intense in those cases where, the integrity of the lung-tissue being unaffected and the supply of blood free, the access of air is prevented; and its intensity in such cases is proportioned to the suddenness and completeness with which the air is excluded. The conditions, therefore, of its greatest development are the conditions tending to flood the capillaries of the lungs with venous blood. The same amount of suspension of aëration of the blood, if it is brought about by a cause tending also to exsanguine the parts of the lung affected (as in *phthisis*), or to diminish the quantity of blood in the body (also as in *phthisis*), may be attended with a hardly perceptible development of the sensation. In sudden impaction of a main air-passage, in laryngitis, croup, and asthma, we see the best-marked specimens of its exaltation.

But there is one form of dyspnœa, and only one that I know of, in which the sense of want of breathing seems suspended, or greatly deadened. In the long-drawn, occasional, and sighing breathing of intense grief, and the breathing of the same kind that characterizes a state of exhaustion (as after tobacco-smoking), the *besoin de respirer* appears greatly deficient. To persons in this condition it seems a matter of indifference whether they breathe at all or whether they do not: each act of breathing, and the time at which it shall be performed, seems a matter of deliberate choice rather than of necessity; and the interval between one inspiratory act and another is sometimes so long as to suggest a fear that another breath will not be taken. I am sure, from observation on my own person, that this form of respiration, at least that manifestation of it that is produced by intense emotion of a depressing kind, depends upon an almost complete suspension of the respiratory sense; there seems no more desire to breathe at the end of a long interval of suspended respiration than at its commencement.

Such, then, are the ways in which these five elements of active respiration may severally diverge from their normal standards. Many more examples might be given of each; but those that I have mentioned are some of the best marked, and they may suffice. It must not be imagined, however, that these perturbations occur separately—that in one case the range of movement is modified, and nothing else; in another the length of interval, and nothing else; in another the moving power, and nothing else. The five conditions of normal breathing that I have indicated are so intimately associated that in almost all forms of disturbed respiration more than one is involved, and generally all, or nearly all. And there are certain laws of association of these disturbances which are not without interest, and of which the following are those which my observations have enabled me the most clearly to detect. They are indicated in the following table, the numbers of which have reference to the preceding table:—

TABLE III.

LAWS OF DISTURBANCES OF BREATH-ELEMENTS.

No. **II.** generally accompanied by No. **III.** (Why?)

„ **III.** sometimes not „ „ **II.** { Emphysema. Asthma, laryngitis.

„ **I. II.** or **III.** sometimes without **V.** Early phthisis, chlorosis.

„ **V.** never without **I. II.** or **III.** (Why?)

ORDER OF DISTURBANCE.

„ **I.** then **II.** and **III.** (which first?); then **V.** then **IV.**

a. Disturbed length of respiratory interval is generally accompanied by disturbed ratio of the parts of the act, at least that disturbance of ratio that is involved in the suppression of the post-expiratory rest; and for this reason, that respiratory conditions that demand an increased range of movement are conditions that forbid the post-expiratory rest.

b. The converse, however, does not always hold—that is, disturbed ratio of the parts of the act is sometimes *not* accompanied by disturbed length of respiratory interval. For example, a narrowing of the air-passages, while it prolongs expiration and suppresses the post-expiratory rest, thus completely deranging the respiratory *rhythm*, will yet directly prevent acceleration of the breathing by rendering a rapid and free supply of air impossible, so that the respiratory *interval* may be as long as natural.

c. Range of movement, length of interval, and ratio of the parts of the act, may all be disturbed without any respiratory distress; and this simply from the fact that increased respiratory exigency may be sufficient to produce the one without being sufficient to produce the other; respiratory arrears must be considerable to produce distress; they need be but very slight to modify the three first-mentioned conditions of normal breathing.

d. Distressful breathing, however, never exists without the breathing being modified in all other particulars; because respiratory arrears sufficient to give rise to distress inevitably gives rise to disordered and violent breathing with the view of relieving it, and because the sensation is set as a taskmaster, as it were, over the act, as the regulator of it—its behests are absolute and irresistible, and physiologically inseparable from their execution.

e. The following is the order in which a gradually increasing

respiratory exigency would modify the conditions of normal respiration. The first thing modified is range of movement; then, length of interval, or ratio of parts of act (I am not sure which first); then, the sensation; lastly, the moving power. For example: suppose there is something that taxes the breathing to the slightest possible extent; it will be a little deeper than natural, and changed in no other way. Supposing the breathing is taxed a little more, it will then be not only deeper, but quicker, and the ratio of the parts of the act disturbed by the shortening or loss of the post-expiratory rest; still there may be no distress or marked sense of breathlessness. If the breathing is taxed a little more, it becomes distressful; still the moving powers may be normal—inspiration muscular, expiration elastic recoil. Tax it, however, to the utmost, and the expiration becomes muscular—the air is pumped out by the expiratory muscles to quicken the act as much as possible.

Such are the principal laws of respiratory disturbance as far as I have yet made them out. I have determined them partly by self-scrutiny, partly by observation upon others, partly by experiment.

TWELVE CASES OF COMPLETED OVARIOTOMY.

BY I. BAKER BROWN, ESQ., F.R.C.S. (EXAM.),
SENIOR SURGEON TO THE LONDON SURGICAL HOME, ETC.

I WOULD place on record, as bearing upon the recent discussion in the pages of THE LANCET, my last twelve cases of completed ovariotomy. This I think to be due to myself, as my name has been freely used by the disputants, and as I am one of the oldest ovariotomists, and have spent more than thirty years in steady work on the subject of ovarian disease.

CASE 1. *Multilocular ovarian dropsy, twelve months' duration; ovariotomy; recovery.*—Miss V——, aged twenty-nine, suffering from a large abdominal tumour, came under my care in November, 1864, on the recommendation of her medical attendant, Mr. Thorne, of Pimlico. She had been ill for twelve months, and attributed the first formation of the tumour to excessive weakness after great excitement. The catamenia had been regular at first, but had afterwards ceased for five months. Eight months prior to the time when first I saw her, she had an attack of inflammation of the liver.

On examination, the tumour proved to be ovarian, doubtless multilocular, and with very numerous adhesions. The patient was extremely emaciated, and food always caused sickness. She was exceedingly anxious to have the tumour extirpated, and, after a short course of preparatory treatment, I operated on the 21st of November. Dr. Cole of San Francisco, Dr. Martin of Berlin, Dr. Duke of Bengal, Mr. Thorne, and others, were present.

Having made my primary incision, I found, as I had anticipated, very numerous and firm adhesions. In fact, the tumour was adherent almost everywhere. One broad mass of adhesion to the parietes, situated near the upper end of the incision, I secured by a double ligature, and retained it outside the abdomen by transfixing it with a long-handled needle below the ligature, so as to ensure sloughing outside the peritoneum. Besides this adhesion, there were adhesions along the whole border of the omentum to the liver and to the right pelvic fascia. All these I divided by the actual cautery in the manner I have lately advocated. Having first secured the adhesions piece by piece in a clamp, I then seared them through with a red-hot iron. The separation of the adhesions occupied one hour. The pedicle was secured by a clamp, and retained outside the abdomen. The wound was closed in the usual way.

After the operation a severe form of low peritonitis supervened, and she was only kept alive by very active and persevering stimulant treatment. She was, however, able to leave her bedroom a month after the operation, and a week afterwards she took open-air exercise.

CASE 2. *Ovarian dropsy of five years' duration; doubtful diagnosis; exploratory incision; extirpation; recovery.* (Abridged from notes by Dr. Bottle, House-Surgeon.)—Mary Ann A——, aged thirty-one, was admitted into the London Surgical Home on the 7th of November, 1864. She was sent by Dr. Taylor, Queen's-road, Bayswater. About five years before, she first discovered a swelling of the abdomen on the left side, causing so much excitement of the nervous system and pain that she was thought to be mad. The bowels were costive; the catamenia regular. On examination, a large abdominal tumour was found, having a very indistinct sense of fluctuation. The bowels were much disturbed from pressure of the tumour. On an exploring needle being passed into the tumour no fluid escaped. The patient was very hysterical, continually screaming and crying. Twenty-four hours after the exploration phlegmasia dolens of the left leg took place, and continued two or three weeks.

After careful preparatory treatment, I operated on the 22nd of December, the patient being under the influence of chloroform. The primary incision was about four inches long, and the tumour was quickly brought into view. The nature and appearance of the tumour were peculiar. In colour it was of a dark-brown, in form almost globular, with a very regular surface. It was exceedingly elastic to the touch, was movable in every direction, and very much resembled an enlarged uterus. Having extended the incision two inches, the tumour was punctured, and about half a pint of dark, sanguineous fluid escaped. The tumour was then withdrawn, numerous adhesions to the peritoneum being broken down by the hand. The pedicle, which was of the same nature as the tumour, and proceeding from the right ovary, was secured by a clamp. A portion of diseased omentum was removed by the red-hot iron, and several bleeding vessels were also stopped by the actual cautery. The wound was then closed in the usual manner.

This patient recovered slowly. Having a very irritable stomach, it was necessary to sustain her almost entirely for many days by beef-tea injections. The discharge from the wound was of an unusually offensive character. The clamp was removed on the fifth day, and the stitches on the thirteenth. She was discharged on January 17th, 1865, quite well, and up to this time has remained in perfect health.

This was a very interesting case from the difficulty of diagnosis. It will be observed that even the exploratory needle failed to throw light upon it. It was only by an exploratory incision that the true origin of the tumour was discovered.

On examining the tumour after removal, it was found to be composed of separate cells with true cystic linings, but the fluid was almost entirely sanguineous. This tumour was exhibited at a meeting of the Obstetrical Society.

CASE 3. *Multilocular ovarian dropsy, five months' duration; ovariotomy; recovery.*—Mrs. Mary P——, aged forty-seven, came under my care in December, 1864. The following history is from notes by Dr. Burchell, of Kingsland-road, the patient's usual medical attendant:—

Mrs. P—— is married, and the mother of three children, the last born twenty-one years ago. She has not been pregnant since. Although of rather full habit, she has always enjoyed good health, with the exception of suffering from anal fistula seven years ago, which was relieved by operation. The catamenia ceased last June. In the middle of last August a tumour was discovered in the left groin. She had suffered from flatulence and pain on the right side for some weeks previously, but at this date there were no signs of effusion. Dropsy first manifested itself shortly afterwards, and rapidly increased.

On examination, I discovered a very large multilocular ovarian tumour. It was evidently growing very rapidly. I therefore advised immediate removal.

The operation was performed on the 28th December, Dr. Burchell, Mr. Clarke, and others being present. I extirpated the tumour, which was attached to the left ovary. It contained above three gallons of fluid, and the solid matter weighed about six pounds. The adhesions were very extensive and unyielding, more especially on the left side. So firmly was the cyst adherent to the peritoneum, that the latter was torn from the rectus muscle, and the tear required to be stitched up with two silver sutures. Actual cautery was applied to the bleeding vessels, and the pedicle was divided by Mr. John Clay's adhesion clamp, and immediately allowed to sink back into its normal position.

The wound was healed in a week, and the patient recovered without an unfavourable symptom.

CASE 4. *Multilocular ovarian tumour of fifteen months' duration; one previous tapping; ovariotomy; recovery.*—Miss B——, aged twenty-two, a patient of Dr. Greenwood's, of Dalston, came under my care, by his recommendation, on the 25th of February in the present year. A tumour had first been discovered in the right side about fifteen months before. This increased to so great a size that the patient was obliged to be tapped six months back, when three gallons of thick brown fluid were drawn off. The cyst refilled rapidly, and soon became as large as before tapping. The general health was good, although the patient was not strong. On a careful examination

of the case, I diagnosed a large multilocular ovarian tumour attached to the right ovary.

I operated in March, Dr. Jameson of Dublin, Dr. Greenwood, and others being present. On opening the abdomen and exposing the tumour, I found very strong and general adhesions, particularly on the right side, which were divided by the actual cautery. Several bleeding points were also cauterized. About four gallons of fluid were drawn off, and the tumour extracted. The pedicle was divided by my own adhesion clamp. The left ovary being also diseased, I divided it with a knife, and seared the cut edges with the cautery iron. Before closing the wound, I sponged the pedicle to see if there was any hæmorrhage. This slight interference was sufficient to disturb the burnt surface; and, therefore, it was thought judicious to transfix the pedicle by a double ligature, and leave the ends outside, in the manner recommended by Dr. Clay, of Manchester. The edges of the incision were brought together in the usual manner.

The recovery of this patient was slow but continuous, and she was quite well in five weeks.

This case taught me, what after-experience has confirmed, that, having divided the pedicle by cautery, one may be sure (1) that all the vessels are closed, and that it is advisable at once to allow the pedicle to sink back to its normal position; and (2) that the only chance of secondary hæmorrhage arises from subsequent interference.

(To be concluded.)

A SUGGESTION IN AID OF LARYNGOSCOPY.

By GEORGE JOHNSON, M.D., F.R.C.P.,
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On a former occasion I made some suggestions for facilitating the use of the laryngoscope, which have been very generally adopted, and which I have reason to believe have been found of much use.* I have now to describe a very simple contrivance for obviating one of the most serious inconveniences to which laryngoscopists are exposed: I mean the painful glare of light in the eyes of the operator, whether he employs the light of the sun or that of a lamp. Everyone who has worked much with the laryngoscope must have experienced the unpleasant effect resulting from continued exposure of the eyes to the glare of light. So long as the operator looks through a perforated reflector placed in front of one eye there is no mode of escape from the annoyance in question. It may be avoided entirely by the simple device of a black shade over the eyes, the shade being placed beneath the reflector on the forehead, and fastened by two hooks and eyes to the band which passes round the head. The shade is made of a piece of card covered

with black silk. The eyes are sown on the elastic band which holds the reflector, that on the right being fixed on the *inner* side of the buckle, so as not to interfere with the movement of the band through the buckle. The hooks—such as ladies use for holding up their dresses—are attached to the upper edge of the shade, one near each end. The shade therefore can be quickly attached to the band, and as readily removed.

The effect of the shade is to protect the eyes entirely from the direct glare of the sun or of the lamp, while the light reflected from the laryngeal mirror passes beneath the shade to the eyes of the operator, and the result is a more distinct view of the laryngeal image, with much less of fatigue and annoyance to the eyes than in the ordinary mode of practising laryngoscopy. When a lamp is used, its flame should be about the level of the top of the patient's head. The shade must be sufficiently wide to protect the eyes from the direct glare of the lamp or of the sun, without obstructing the rays reflected from the laryngeal mirror. The shade can be made and fixed without the help of an instrument-maker, and I commend this simple contrivance to the notice of my fellow-workers in the interesting field of laryngoscopy.

I see that a recent writer in THE LANCET, Dr. Eben. Watson of Glasgow, expresses his opinion that the value of the laryngoscope has been over-estimated by some whom he considers too zealous advocates of this new method. With regard to the alleged frequency of polypous and other morbid growths in the larynx, he appears to be sceptical, and "cannot repress the wish that laryngoscopists had these strange visions granted to them a little less frequently." Dr. Eben. Watson apparently suspects that some of these visions have been of a *spectral* character. He also expresses his opinion that "laryngoscopy is neither required for nor assists in the ordinary topical medication of the larynx, and that it is a most unsafe guide in surgical operations on that organ." The removal of warts from the vocal cords by the aid of the mirror he speaks of as "rather a wonderful feat in surgery," and he evidently doubts the possibility of such a proceeding. I should have thought that the number of well-authenticated cases in which morbid growths in the larynx have been discovered and removed by the aid of the laryngoscope would suffice to convince even the most sceptical that growths in this situation are not uncommon, and that their removal by the aid of the mirror presents no insuperable difficulty. I have myself within the last two months removed a tumour from one of the vocal cords in no less than three cases. I have the morbid growths to show as evidence that "this rather wonderful feat" has been accomplished, and I shall shortly publish full particulars of the cases. In not one of these cases could the cause of the hoarseness have been ascertained without the aid of the laryngoscope, much less would it have been possible to carry out a successful plan of treatment, resulting, as it has done in each case, in the complete restoration of the voice.

Savile-row, August, 1865.

* Some time since, I received from an eminent provincial physician a note, from which the following is an extract: "I had bothered over the laryngoscope a long time and done very little with it until I saw your suggestion of putting the reflector on the forehead; now I find it of very great use."

PATHOLOGICAL CONSERVATIVE SURGERY:

ITS DEFINITION AND PURPOSE.

By FREDERICK JAMES GANT, F.R.C.S.,
SURGEON AND PATHOLOGICAL ANATOMIST TO THE ROYAL FREE HOSPITAL.

IN my introductory lecture last October, on the "Pathological Practice of Surgery," which was published in THE LANCET, I dwelt on the conservative character of all surgical treatment when guided, regulated, and determined by (foreknowledge of) the natural courses and tendencies of injuries and diseases to or towards *recovery*. This aspect of their vital history implying the operation and resources of a *self-restorative* power inborn and inherent in the human body, the practice of surgery *thence* derived necessarily becomes conservative or *preservative* of its anatomical and functional integrity. Moreover, as the subjection and adaptation of such practice to the requirements of the self-restorative organism reduces our treatment to the *least* amount of assistance necessary, as well as indicating the kind thereof, and the earliest occasion for such assistance; this limitation, in point of degree, also confers a conservative or *non-interfering* character on the practice of surgery; and, observe, by ever referring the surgeon to clinical observation of the vital history of injury and disease, rules our art from the sure and commanding ground of pathology.

Pathological Conservative Surgery, as this contribution of

pathology may be properly denominated, obviously has a parallel in the practice of Medicine, which, in like manner, acquires the conservative character in so far as it is the reflection of natural processes of cure—a co-operation only with, or response to, the bodily organism in its own workings to or towards recovery from diseased states of structure and function.

Thus extended, my view of conservatism in medicine and surgery signifies a pathological and general source of guidance in the administration of our remedial measures, and in the contrivance of appropriate surgical operations.

Now, as regards conservative surgery, this view is, I affirm, by virtue of its *distinctive* and *comprehensive* character, far superior to that which has hitherto prevailed. The definition originally proposed by Mr. Fergusson in 1852, and to which he still adhered in his recent lectures* before the Royal College of Surgeons, presents a striking contrast:—"Every saving act of surgery," said he, "may be denominated conservative; but the phrase in modern times has a peculiar significance. It is meant to show that, instead of the sweeping and radical measure of total separation or amputation, a compromise may be made whereby the original constitution and frame, as from the Maker's hand, may be kept as nearly as possible in its normal condition." But the final object or purpose of (all) surgery obviously being, as Mr. Fergusson himself intimates, the preservation of limb and life, the compromise proposed is only the continued pursuit of this final object by the *more exact* contrivance of surgical operations.

There is, then, nothing new, nothing distinctive, in Mr. Fergusson's "conservative surgery." Abstract from surgery the idea of preservation, and nothing remains to be accomplished: the surgeon's occupation is gone. "When, however," Mr. Fergusson continued, "a part of the body is dead or incurably diseased, and must of necessity be removed, I am of opinion that 'conservative surgery' may be displayed in a variety of ways—e. g., excision of an incurably diseased joint rather than amputation of the limb." Yet surely this is a singularly disadvantageous restriction. Mr. Fergusson's "conservative surgery" deliberately excludes and rejects the advantage of any remedial measures until the part has become incurably diseased. The only peculiarity of the aspect of surgical practice he proposes is simply this: starting with an incurably diseased state, Mr. Fergusson *then* proposes, anomalously, to preserve "the original constitution and frame as from the Maker's hand"!

It is of momentous consequence to observe that this restriction altogether precludes the idea of any medical treatment; whereas such treatment, and in the sense of (medical) co-operation with the restorative power of the body, I regard as a conspicuous feature of true conservatism. Mr. Fergusson's definition is *exclusively* confined to operative proceedings,—designed, as we have seen, without any distinctive purpose over that of plain unvarnished surgery, but with positive inferiority as to the amount of preservation proposed; the privilege of preserving the original anatomical integrity of the part having been forfeited by the supervention of some incurably diseased condition. Hence, the *prevention* of disease is totally disregarded by this view of conservatism. Surgery, robbed of its highest attribute—preventive power,—and reduced merely to the treatment of incurable disease, by then removing only so much of the body, is indeed poor compensation for that timely co-operation by medicinal measures, by mechanical appliances only, or both combined, whereby the bodily organism would itself have wrought a far happier issue.

Lastly: mark, once more, the contrast of Mr. Fergusson's "conservative surgery." "In respect to the propriety of excision," says he, "I cannot allow that which might be an easy answer to this question. Why perform an operation at all? Why not cure the disease, and thereby avoid amputation? That is a question of a totally different kind. ..... It is the question between excision and amputation, as regards the future condition of the limb." Ignoring the question of medical treatment before the apparent necessity for any surgical operation; the question of this or that operation is therefore *not* referred to pathology, but reduced to the mere handicraft and obvious comparison of a stump with a shortened limb. "Look," said Mr. Fergusson at the College of Surgeons, "on this picture and on that; and I ask your verdict." It is, in my opinion, that the operation of diseased joint excision *versus* amputation of the limb, as a surgical question, is thus left just as it was when first introduced: merely a *practicable* operation on the living body.

Extending my scrutiny to all "conservative surgery" as hitherto understood, I am constrained to conclude that, however much it may be calculated to confer a temporary reputation on the practitioner for operative skill in paring down and trimming up the body when "seemingly incurably diseased," as the standard whereby to estimate our preservative progress, it is, I contend kindly but firmly, a *too mechanical* and *contracted* view of surgery to be transmitted as our legacy to the next age.

This is no question simply about terms. "A rose by any other name would smell as sweet;" and assuredly surgery is equally saving, whether called conservative or not. But surgery, subservient and responsive to the natural courses and tendencies of injuries and diseases to recovery, acquires a *bonâ fide* conservative—i. e., preservative, and non-interfering *character* by virtue of this aspect of pathology; although the *object* of surgery not so characterized cannot be otherwise than to save limb and life.

It is the *power* derived from this source—pathological and *thence* conservative surgery (extending to medicine),—instead of simply "the preservation of the greatest portion of the body at the smallest possible sacrifice," that I have humbly endeavoured, here and elsewhere, to advocate before the profession. Fully acknowledging the great impulse which Mr. Fergusson has otherwise given to the practice of surgery, I have thus put this our "conservative" difference on record.

* On the Progress of Surgery during the Present Century.

* On Conservative Surgery by Resection of Bone, with Cases. By W. Fergusson. THE LANCET, 1852.

† Annali Universali di Medicina, vol. xcviii.

A Mirror
OF THE PRACTICE OF
MEDICINE AND SURGERY
IN THE
HOSPITALS OF LONDON.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

KING'S COLLEGE HOSPITAL.

TUMOUR CONNECTED WITH THE SCAPULA; REMOVAL OF THE ENTIRE BONE; CLINICAL REMARKS.

(Under the care of Mr. FERGUSSON.)

WE are not quite exact in the title, "Removal of the entire bone." Both in Mr. Fergusson's case and in that of Mr. Pollock, which is afterwards recorded, the acromion process was left behind, adding materially, by its presence, to the symmetry of the patient. The expression, however, has been used to distinguish these cases from those in which a portion only of the bone has been taken away, the shoulder-joint not being interfered with.

The scapula, sometimes alone, at others with the whole or a great part of the clavicle, has been not unfrequently excised after amputation at the shoulder-joint had been performed. The procedure has been necessitated in connexion with gunshot injuries of the part, and occasionally also by disease. In 1808 Mr. Cumming amputated the upper extremity at the shoulder-joint and immediately afterwards removed the scapula. In 1841 Gaetani Bey† amputated at the shoulder-joint, removed the whole scapula, which had been broken into several pieces, and cut off the acromial end of the collar-bone. This was for a gunshot injury. In 1847 Mr. Fergusson removed the whole scapula and part of the clavicle in a man who had had his right arm amputated three years previously for caries of the shoulder-joint. The axillary artery was not obliterated, but spirted freely when the finger was taken off the subclavian on the first rib where it had been compressed during the operation not more than four ounces of blood were lost. Portions of the scapula have also been taken away on

account of injury or disease by Syme, Travers, Luke, South, and others. More than twenty years ago Mr. Syme removed the greater part of the scapula in a patient from whom Mr. Earle had previously taken away a large tumour of the bone. In 1819* Mr. Liston removed from a boy three-fourths of the scapula for a tumour of the bone which would seem to have been malignant. It is described as "very large, rendering him as it were hunchbacked; hard and inelastic, firmly fixed to the left scapula, and extending from the spine all over its lower surface. It stretched into the axilla likewise to within half an inch of the nerves and vessels, and a large branch (the subscapular) could be felt creeping along its under surface." He made an incision of a foot long, at least, from the axilla to the lower and posterior part of the tumour. The latissimus dorsi was then cut across at about two inches from its insertion, so as to expose the inner edge of the swelling with a view to tie the subscapular in the first instance. In this he was foiled, owing to its depth, as it passed under the lower edge of the tumour out of the reach of his fingers. The hæmorrhage was most profuse, but the vessels feeding the tumour seem to have been unusually large. Besides the subscapular, two others as big as the ulnar are described. In a month he went home with the wound nearly healed. A few weeks afterwards it assumed an unhealthy aspect, and gradually a dark purple excrescence grew from it, accompanied by occasional alarming hæmorrhage. Liston proposed to remove the remaining portion of the scapula and half of the clavicle. He represented the ease with which the subclavian could be tied by turning forward the scapula from the ribs. He could get no one, however, to second his opinion, and was very unwillingly obliged to give up all thoughts of operating.

The peculiar interest attaching to the three cases which we bring before our readers this week consists in the circumstance that the upper extremity was preserved entire. The scapula was removed, wholly in two of the patients, and partially in the other. The credit of initiating such a procedure must be given to Mr. Syme,† who, in 1856, removed the entire scapula for fungoid disease in the following manner:—An incision was made from the acromion process transversely to the posterior edge of the scapula, and another from the centre of this one directly downwards below the lower margin of the tumour. The flaps thus formed being reflected without much hæmorrhage, he separated the scapular attachment of the deltoid and divided the connexions of the acromial extremity of the clavicle. Then, wishing to command the subscapular artery, he divided it, with the effect of giving issue to a fearful gush of blood; but fortunately he caught the vessel, and tied it without delay. He next cut into the joint and round the glenoid cavity, and hooked his finger under the coracoid process, so as to facilitate the division of its muscular and ligamentous attachments with rapid sweeps of the knife. The case did well as far as the operation was concerned, and the patient declared that the arm was in nowise inferior to the sound one. It appeared, indeed, that through the support afforded by the clavicular portion of the deltoid, together with the action of the latissimus dorsi and pectoralis, the limb would be able to execute a fair degree of motion. Unfortunately the general health gave way, the patient became weak and emaciated (she was very old), and sank two months afterwards.

The late Mr. Jones of Jersey, in 1858, removed the entire scapula, together with an inch of the acromial end of the clavicle, for extensive necrosis. The operation was performed in the following manner:—He first made an incision along the whole extent of the spine of the scapula, carrying it an inch beyond this in the back; then another incision to meet this along the posterior border of the bone down to its angle. The integuments were raised by careful dissection, and the whole bone fairly exposed. It was then removed by carefully detaching the subscapular muscle and other structures which detained it. Lastly, the acromial end of the clavicle was cut through and removed, because it was found much softened and altered by disease. Only one vessel, the posterior scapular, required a ligature, several smaller branches being controlled by torsion. The patient, a girl of fourteen, made a good recovery in the course of six weeks. Within seven months afterwards she could raise her arm twelve inches from the side, and, with slight assistance, support it horizontally from the body. She could raise the hand to the opposite shoulder or to the mouth with ease, but not to the top of the head. She was able to scrub. There was a decided falling of the shoulder, but no wasting of muscular substance on the chest or back. The deltoid was of full size. The head of the humerus could be felt moving easily in its new bed without pain. Mr. Jones thought that the danger from hæmorrhage was much less in removing the whole of the scapula than, as in the case recorded by Mr. Liston, in the removal of only a portion. It is probable, however, that in the latter case the profuse hæmorrhage occurred from the surgeon cutting into a grumous cyst, and that the blood which poured out in such alarming quantity had gradually collected for some time previously, and was not then forming part of the circulation. In 1860, Mr. Syme excised the head of the right humerus for a tumour, and two years afterwards, owing to extension of the disease, he removed the scapula, with a portion of the clavicle, the diseased mass weighing between four and five pounds. In 1864 the patient remained in perfect health, and could lift a heavy chair with the preserved limb. In THE LANCET of June 18th, 1864, there is a woodcut representing him whilst thus engaged, as well as one showing the condition of Mr. Jones's patient six years after the operation. They form part of the illustrations to Mr. Fergusson's lectures delivered at the Royal College of Surgeons in that year. One cannot help feeling, on comparing them with the patients whose cases we subjoin, that Mr. Fergusson has effected a most important improvement in leaving the acromion process. Both in his case and that of Mr. Pollock, who adopted a similar plan, there is singularly little deformity, which cannot equally be said of those pictured in the illustrations. We are indebted to Mr. E. Bellamy, surgical registrar, for the notes of this case.

S. H——, aged twenty-five, a very healthy-looking and muscular young man, was admitted June 14th, 1865, with a tumour about the size of the two fists, occupying the position of the right scapula. He states that he has felt pain in the shoulder-joint for six months past, but that it is only within the last seven or eight weeks he has noticed any swelling. He suffers no pain from the tumour, but there is a sense of numbness in his arm and hand. The integuments covering the swelling are not affected, and there is free movement of the upper arm.

June 24th.—The patient being placed under chloroform, Mr. Fergusson made an incision over the neck of the acromion process, at right angles to it. The bone being exposed, a small saw was used and the process detached. An incision was then made along the spinous process, and a third almost at right angles with this along the posterior border of the scapula. The flaps included by these incisions were next reflected, and the tumour was exposed, the muscles covering it being implicated in the disease in a great measure. Mr. Fergusson next seized the spinous process with the "lion forceps," and lifted up the mass in order to expose and cut through the capsular ligament of the joint. When this had been effected, the forceps were applied to the axillary border of the bone, and it was thus lifted from off the walls of the chest, and the muscles cut through. A considerable amount of hæmorrhage occurred at this part of the operation, owing to the division of the subscapular and dorsalis scapulæ arteries. The mass was still firmly held by the muscles attached to the coracoid process; these and the coraco-clavicular ligaments were divided, and the diseased scapula was removed. The articulation was perfectly healthy. The bleeding vessels were tied, the flaps brought together by sutures, strapping and a large pad placed over the wound, and the patient removed to bed.

Three hours after the operation, Mr. Bond, the house-surgeon, found a considerable oozing of blood into the dressings. The application of ice failing to command this, he opened the wound and introduced lint steeped in the perchloride of iron, by which the hæmorrhage was arrested.

For two days the patient remained in a very critical condition, suffering from extreme prostration, and requiring to be sustained with large quantities of beef-tea and brandy. He then rallied, and has since progressed most favourably, the wound gradually filling up with healthy granulations. He goes out of the hospital frequently for a walk. On August 19th we found him looking hearty, and not complaining of any inconvenience. He had then considerable power of moving the arm in an antero-posterior direction. Only a small portion of the wound remained to be healed. The tumour, when examined, was found to be of a medullary character. It had involved the spinati and subscapularis muscles, and there was a good-sized process from its inner border, which had projected into the axilla, and doubtless gave rise to the symptoms of paralysis by pressing upon the axillary plexus of nerves.

In subsequent clinical remarks on this case Mr. Fergusson pointed out the singularly rapid progress of the disease, which, although it involved the greater part of the scapula, had been

* Edinburgh Medical Journal, vol. xvi.
† Medico-Chirurgical Transactions, vol. xl.

observed for the first time only a few months before, and stated that this feature was observable in the history of various instances of a like kind. He had met with certain tumours of this bone, as slow in their progress as in osseous structure elsewhere, but he had been impressed with the apparent rapidity of development in some of these cases. Removal of the scapula, with at the same time preservation of the arm, was entirely a modern achievement in surgery, and for which we were indebted to Mr. Syme of Edinburgh. Since the time of Cheselden it had been known, by repeated illustrations, that a person might survive after such a fearful injury as the wrenching off of the whole upper extremity, including scapula and clavicle; and, acting on such a knowledge, surgeons had from time to time actually performed such operations on the living body with perfect results. He had himself many years ago removed the whole scapula, with the greater part of the clavicle, in an instance of chronic caries following an ill-judged amputation of the arm at the shoulder-joint for a chronic disease of that articulation, and that he believed was the first instance in which the operation had been performed in this country. The operation recently performed was, however, of a different, and, in his opinion, very superior character, for it was done with the view of preserving a useful upper limb. Only three cases of the kind were known to have occurred in British surgery—two by Mr. Syme, and one by the late Mr. Jones of Jersey. The present case was the fourth, with which he was acquainted, and the first of the kind in London. The onlookers had an opportunity of judging for themselves regarding the difficulties and dangers of the operation. In a strong muscular young man, not emaciated by long-standing disease, the incisions seemed long, deep, and difficult, and the bleeding had been very considerable. These features had been the more remarkable in this instance, perhaps, because of the method of operation. In accordance with the description of Mr. Syme, he had disarticulated at a somewhat early period; his intention being to take the tumour and bone out from before backwards. In disarticulating and also separating the coracoid process, the difficulties were greatest, and vessels were divided near the axilla at points where they could not readily be compressed. In consequence of what he now referred to, he should be disposed, if called on to perform this operation again, to isolate the back part of the mass first, and so leave the disarticulation to the last; both because the parts could be more readily got at by holding the scapula forwards, and because the larger bloodvessels would not be cut until the time when the growth was about to be finally separated. One feature Mr. Fergusson particularly dwelt upon—that he had preserved the acromion process; partly because it was not diseased, but chiefly because the shoulder would thereby be left more perfect both as to appearance and use; for by so doing the portions of the trapezius and deltoid attached to that process were left entire; and, in addition, that the incisions were thereby less extensive and less destructive.

TUMOUR CONNECTED WITH THE SCAPULA; REMOVAL OF TWO-THIRDS OF THE BONE.

(Under the care of Mr. FERGUSSON.)

The notes of the following case were taken by Mr. J. B. Welch:—

Mary P——, aged nineteen, single, a healthy-looking girl, was admitted on the 4th of January last. Four years ago, without any assignable cause, she began to feel a continuous gnawing pain at the back of the right shoulder. The pain, she stated, was more severe in damp or cold weather. After a year she noticed that the shoulder began to swell. This swelling never assumed the form of a distinct tumour, but appeared to be a swelling of the whole bone, and has increased up to the present time. On examination, a very hard and somewhat oval swelling was seen at the back of the right scapula. The skin was freely movable over the tumour, which seemed to be firmly united to the scapula, and freely movable with it. The swelling extended over the whole of the dorsum of the bone, from its inferior angle to its spine, and somewhat beyond the bone into the axilla. The spine of the scapula could be distinctly felt. All the motions of the shoulder-joint were perfect.

Jan. 13th.—The patient was taken into the operating theatre, and chloroform having been given, Mr. Fergusson made an incision across the tumour, almost parallel with the inferior border. By this incision a fibrous mass was exposed. He next deepened this incision, in order to examine the condition of the bone, and, finding it implicated by the tumour, extended the cut to the lower angle of the scapula. A second incision was then made parallel with the spine of the scapula, meeting the first near the acromion, thus enclosing a flap a little less than a right angle. The flap having been dissected back, the bone was sawn across just below its spine. The tumour was then seized with the lion-forceps, and dissected from the parts around, together with the portion of the scapula sawn through. Several small portions of the bone that appeared to be affected were then clipped off with the bone-forceps. Some vessels were ligatured, the loss of blood being very slight.

On examination after removal, the tumour was found to be about the size of a large orange; and, on section, it seemed to be of a recurrent fibroid nature. At one spot the tumour had caused the absorption of the scapula, and appeared on its ventral aspect.

Jan. 18th.—She is getting stronger daily. She sleeps well; her appetite is good; the wound discharges a little healthy pus; the margins of the wound are uniting rapidly. She suffers little or no pain.

Feb. 8th.—Discharged. The wound has healed nicely, and she can move her arm freely. There is no deformity.

ST. GEORGE'S HOSPITAL.

TUMOUR CONNECTED WITH THE SCAPULA; REMOVAL OF THE ENTIRE BONE; CLINICAL REMARKS.

(Under the care of Mr. POLLOCK.)

CHARLOTTE T——, aged sixteen, admitted Jan. 30th, 1865. She stated that about twelve months ago her shoulder began to ache very much. This first drew her attention to the part, and she noticed a small lump, which has gone on steadily increasing ever since, and has occasionally caused great pain.

On admission there was found to be a circumscribed tumour in the infra-spinous fossa of the scapula. It was hard, quite smooth and uniform on the surface, and firmly adherent to the bone, moving with the bone.

Feb. 1st.—She was placed under chloroform, and a free incision was made into the tumour. The finger, upon being introduced, after passing through a considerable wall of solid matter, entered a cavity, at the bottom of which the dorsum of the scapula could be felt exposed and carious.

This operation was followed by very violent febrile symptoms and immense discharge, and she rapidly lost flesh. After a time she began to improve, when, on March 12th, she had a fit, probably of an epileptiform character, though she was not subject to this disease. This was followed by a second fit on April 2nd. During the whole of this time the tumour remained almost stationary, and the wound assumed a healthy aspect. Early in May, however, the tumour began to increase, and an operation was now proposed, but was not consented to. She also began to suffer more pain. On May 27th she had a violent attack of hæmorrhage, which exhausted her very much. The wound now took on a very foul and unhealthy aspect, and the tumour increased rapidly. Towards the latter end of June the wound again became healthier, the foul surface became clean and began to cicatrize, and her general health improved.

On July 27th the wound was nearly healed. The tumour had now reached the size of a fœtal head. She was placed under the influence of chloroform, and, the subclavian artery being compressed by an assistant, an incision was made along the vertebral border of the scapula, and the tumour freed by tearing through its attachments on this side. An incision was then made down the axillary border, and extended in a semi-circular manner over the top of the tumour to meet the former one. The acromion process was then cut through, and the whole mass forcibly torn, with the occasional aid of the knife, from its attachments.

Upon examining the mass after the operation it was found to be confined to the infra-spinous fossa: it was soft and easily broken down with the finger, and the bone in this situation was roughened and exposed, being entirely denuded of periosteum. Under the microscope it was found to consist almost entirely of cells, circular in form, uniform in size, and containing both nucleus and nucleolus.

Since the operation the patient has gone on remarkably well. At present (Aug. 17th) the wound is all but healed, and she seems extremely well in herself and is gaining flesh.

In his remarks upon this case Mr. Pollock observed that, from the growth of the tumour and the disastrous effect it produced upon the girl's health, it was felt that her only chance of life consisted in its removal. He drew particular attention to the small quantity of blood which was lost during

the operation. This result he attributed to the excellent assistance he had received, and to the fact that the subclavian artery had been compressed during the procedure. He had commenced to detach the scapula at its posterior border, and then at its inferior angle. The detachment was thus a very simple matter. By throwing the scapula outwards and upwards an assistant was enabled to grasp the subscapular artery before it was divided. This was by far the most formidable artery in the operation, and there was no hæmorrhage upon its division. He had adopted the plan, which he had seen recently pursued by Mr. Fergusson, of cutting through the acromion process and leaving its extremity. The clavicle being untouched, a sort of cup was formed for the head of the humerus, and there would, he thought, be little deformity. He had intended, if the tumour had been found less extensive, to have cut through the neck of the glenoid cavity, and left it so as not to interfere with the joint at all. But Mr. Syme's cases had proved so satisfactory that he saw no objection to the present course.

Reviews and Notices of Books.

A Course of Practical Chemistry arranged for the Use of Medical Students. By WILLIAM ODLING, M.B., F.R.S. London: Longmans and Co.

THE first edition of this work has been exhausted for more than three years, the author evidently preferring that it should remain out of print until he could find time to make such additions and alterations as the rapid advances of chemical science rendered necessary, and as should increase its usefulness as a laboratory guide.

The present issue contains much additional matter. The first chapter, treating of Chemical Reactions and Manipulations, is quite new; the second, relating to General Analysis, has been rewritten; and the third and fourth chapters, perhaps the most valuable in the book to the medical student and practitioner, treating respectively of Toxicological and Animal Chemistry, have been revised.

As a teacher of chemistry of many years' standing, there are few professors better qualified for the task of writing such a work as the present than Dr. Odling, intimately and practically acquainted as he is with all the requirements of the student, and not many would have executed the task in a more complete and appropriate manner. It must be a very difficult thing for a practical chemist to write a small book, for out of the abundant stores of his own knowledge and experience he must feel constantly tempted to dilate upon many parts of his subject; and it is not one of the least merits of the author that he should have resisted this temptation, and have produced a work remarkable for conciseness, clearness, exactitude, and thorough adaptation to the end in view—namely, the production of a work on practical chemistry designed specially for the medical and chemical student.

The Student's Book of Cutaneous Medicine and Diseases of the Skin. By ERASMUS WILSON, F.R.S. Part II. London: Churchill.

IF the reader will refer back to our last volume, page 204, he will find such notice of the general character and performance of Mr. Wilson's manual as the first portion then published permitted us to give. We were then justified, however, in stating that this new class-book was well adapted to the necessities of students. The second and concluding portion fully confirms our previous judgment. The former part was occupied with the consideration of the diseases included in the first nine groups of the author's "clinical classification." The present one comprehends the remaining thirteen groups of the systematic arrangement here adopted. Amongst these occur the "phytodermic affections" of the cutaneous surface, which "present the character in common of developing a morbid tissue resembling that of a fungous plant or mucedo," and which it is the custom at present amongst the majority of dermatologists to regard as actually *fungoid growths*, and not as mere resemblances. But let us hear Mr. Wilson:—

"What is this phytiform growth? Is it, as we maintain, an alteration of structure of the elementary components or granules of the cell-tissue of the rete mucosum? Or is it an independent organism—a plant originating from a sporule or seed conveyed accidentally to the skin, fixing itself in the soft cell-tissue of the rete mucosum at the expense of the nutritive fluids of the skin, just as a lichen or fern may grow upon the bark of a tree? Is it a parasite figuratively, as a blood-corpuscle or an epithelial cell may be a parasite? or is it a parasite actually? The latter is the theory maintained by many, and that theory is embodied in the expression 'parasitic diseases of the skin;' and, that no mistake should arise, the parasitic plants are arranged by the side of the parasitic animals, the acarus scabiei and entozoon folliculorum.

"The question is important, not so much in a practical point of view as in its relation to physiology. We maintain that we have seen the cells of the rete mucosum passing though those stages of growth which have converted their nuclei into granules—the so-called sporules. We maintain that the granular condition is the normal fœtal structure of the young epidermal cell; and that the morbid condition in question is an arrest of development of those cells at their fœtal stage, and the cause of their consequent modification of destiny—no longer to rise through those higher stages of animalization which culminate in the production of horn, but doomed in their crude condition to the lowest function which belongs to immature organic matter, namely, proliferation. We can find no better word to express this degradation of structure than the term 'granular degeneration.'" (p. 418.)

To this second part is added an appendix containing Hebra's classification of cutaneous diseases. Altogether, this new manual may be considered an opportune acquisition to the bookshelves of the student and young practitioner.

THE WRITING OF PRESCRIPTIONS.

To the Editor of THE LANCET.

SIR,—I think the majority of medical men in private practice among the educated classes—among those who know a little about medicine and the nature and effects of drugs, and think they know a great deal—will agree with Dr. Quain that prescriptions should be written in Latin, and, as far as possible, the real nature of the drugs prescribed hidden from the patient; for what is more common than to hear such remarks as these: "I cannot take opium in any form," "I cannot take quinine," "No tonics ever suit me," "Sedatives always disagree with me;" and the medicine will not be taken if it contains any of the proscribed drug. I will allow that there are some whose constitutional peculiarities do not admit of the administration of opium, and a few of quinine and other drugs; but the majority of our patients have some prejudice against particular drugs which is quite unfounded; and many there are who would not swallow a dose of arsenic, strychnine, or antimony, if they knew what they were taking, and if they did know, would not be long in discovering symptoms of poisoning. Some, again, there are who attribute every symptom, imaginary or otherwise, to the effect of the medicine they are taking. These patients I avoid as much as possible, as they do medical men an incalculable amount of injury by their unscrupulous assertions. It was but yesterday I was consulted by one of this class, who was suffering from neuralgia of the side of the face and head from a decayed wisdom-tooth and slight deafness from an accumulation of wax in her ears. She attributed all her suffering to medicine prescribed for her by another medical man, and was quite incredulous when I told her the true cause of her suffering. I do not believe I shall have the pleasure of seeing her again, and I hope I shall not.

The directions, I consider, should be always written in *legible* English, that no mistake should possibly occur on the part of the chemist, whose amount of Latin in many instances does not admit of his translating any but the most ordinary directions.

I am, Sir, yours obediently,

Aug. 1865. J. BRENDON CURGENVEN.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL.—It has been lately decided to increase the medical staff of this hospital. There is a vacancy for a medical officer for the out-patients.

THE LANCET.

LONDON: SATURDAY, AUGUST 26, 1865.

DR. STOKES and Mr. SYME are well entitled to a respectful hearing when they review the progress of their respective departments of Medicine. They have both been hard workers for forty years, and by dint of hard work have attained to the very highest eminence. So long as the British Medical Association can secure addresses from such men so long will its annual meeting be regarded with interest, and considered important by the whole profession.

Dr. STOKES could think of no other claim to the honour which the Association conferred on him, than that he had laboured "to improve the *social position* of the profession in this country," and that he represented the Irish school of Medicine, whose virtue had always been its clinical and practical character. The profession, while acknowledging the strength of these claims, will, we venture to say, have remembered others, and has already read the elaborate address of the Irish professor with an attention that is only given to men who have seen the diseases of two generations—who have studied its laws and watched its changes. It will have remembered his work on "Diseases of the Heart," and his rarer work on "Diseases of the Chest"—his original observations on some of the most vital, or, shall we say, unvital signs in fever; it will have thought of him as the student who, so long ago as 1825, appreciated the good and philosophical ALISON, of whom he said, in words which all who have known the Edinburgh professor will endorse, "ALISON, the best man I ever knew;" it will have thought of him as the friend, colleague, and biographer of GRAVES, the "perfect clinical teacher," and with these associations will have deeply pondered all that Dr. STOKES has thought fit to say.

The principal topic discussed in the Address on Medicine was that of "Change of Type." Dr. STOKES added his important testimony to that of ALISON, WATSON, CHRISTISON, and others, that disease now is not like the disease that was observed forty years ago. This subject has been well ventilated now, and will scarcely bear to be the subject of many more addresses. Yet it must be allowed that Dr. STOKES infused a sufficient amount of individuality, and, perhaps, we may say, of feeling, into his argument to sustain the interest of it to the last. He was most forcible and original when he appealed to morbid anatomy for confirmation of the proposition, generally based on therapeutical experience, that disease is not now what it was. His description of the different appearance of pneumonic lung now as compared with its appearance then is striking. Between 1820 and 1830, in the early stage, there was "a state of dryness and vivid scarlet injection" to which he had given the name of "the first stage of pneumonia," the appearances in the latter stages of the case being redness, firmness, compactness, and defined boundary of the solidified lung. "Since that period pneumonic lung has had quite another aspect, one more approaching to splenization, the affected parts purple, not bright red; friable, not firm; moist, not dry; and the whole looking more like the result of diffuse than of energetic and concentrated inflammation." Such a picture by such an observer as Dr. STOKES must be received with the utmost respect. It is at variance with the opinion of Dr. HUGHES BENNETT, who is the champion of the opposite theory, "that inflammation is the same now as it has ever been." In defending this opinion, Dr. BENNETT says that such changes in the nature of inflammation as Dr. STOKES and others allege to have occurred "have not been shown." After the above vivid description by Dr. STOKES Dr. BENNETT can scarcely continue to make this statement. On the question of the change in the appearance of pneumonic lung Dr. BENNETT would seem to be out of court. His averment that inflammation of the lung gives rise to precisely the same appearances at all times, is not to be set against the positive testimony of Dr. STOKES to the fact of a difference. Dr. BENNETT is an authority in medicine in this decade, and deservedly so; but as to the phenomena of disease between 1820 and 1830—when amongst the sick poor of Edinburgh ALISON and STOKES were discerning changes, which required instead of the taking of blood the giving of wine—it is no disparagement to him to say that he lacks the experience necessary to give weight to his opinion. For all this we are not inclined to agree with Dr. STOKES in thinking that there is any alteration in the nature of disease now great enough to explain the change which has come over the treatment of it. Dr. BENNETT is unquestionably right in saying that cases are constantly occurring now presenting all the appearances of acute pneumonia—rigors, hot burning skin, white tongue, and full pulse; cases in which the fathers in medicine so deservedly honoured by Dr. STOKES would have certainly bled, but which do perfectly well without bleeding. We must also say that, in our opinion, Dr. STOKES was very unsuccessful in his attempt to disparage the value of Dr. BENNETT'S table of pneumonia cases on the ground "of the difficulties which attend medical statistics." This remark seems to us out of place. The diagnosis of pneumonia now is not a difficult matter to an advanced student; and those who study this table, and who know Dr. BENNETT and his clinical system, will readily allow that there is nothing in it of the looseness of medical statistics, but that it is a reliable record of so many well diagnosed and carefully recorded cases. And of the 129 cases only four died, all of the four having other organic disease. Dr. STOKES will not allow that the mere improvement in physical diagnosis explains the difference in the treatment of disease. Of course improvement in physical diagnosis is only one of the causes of improved therapeutics, but it is one; and Dr. STOKES knows one physical sign at least which has led to a mine of good practice. He maintains that we still make mistakes in the diagnosis of pneumonia, and that we call many cases pneumonia which really should be called cases of aborted fever. This is a very suggestive and probably a very true observation, which reminds us of a kindred one by ALISON—that a more advanced pathology may, perhaps, some day show a relation between fever and pneumonia. The discovery of such a relation, however, would be an accession to the strength of Dr. BENNETT'S views rather than to those of Dr. STOKES, and would make it more certain than ever that pneumonia is not to be treated by lowering and depressing measures. Dr. STOKES and Dr. BENNETT are both right in attaching the utmost importance to this question. No doubt it

affects the fallibility of our forefathers. We will not yield even to Dr. STOKES in veneration for them—for SYDENHAM and FOTHERGILL, HEBERDEN and FORDYCE, CULLEN and GREGORY. But we do them little honour in refusing to admit that their practice could be improved, or in allowing our respect for them to limit in the slightest degree our liberty of judgment on scientific questions. There are no greater physicians now than these; but it is quite reasonable to think that many a humble practitioner is doing a sounder practice. It would be discreditable indeed if the practice of medicine, of most vital consequence to mankind, had made no advance when everything else has been advancing, and when all the collateral sciences upon which a true system of medicine must be based have been advanced so remarkably—such as organic chemistry, physiology, and pathology. Practical medicine has made great strides, for some of which we are not a little indebted to Dr. STOKES; but there is much room yet for further improvement. It is only by admitting the need for improvement that we are likely to bring it about. Dr. STOKES's address will take rank amongst the most interesting and important that have been delivered before the Association; but we fear it will also serve to show how hard is the struggle, with men of great talent and proper reverence, between respect for honoured authorities and respect for modern discoveries.

On Professor SYME's address we have less to say. It was able, and withal liberal. As to the respect due to authorities, he expressed himself explicitly as at variance with the author of the address in Medicine. "I must entirely dissent," said he, "from the opinion which was expressed by my respected friend who addressed you yesterday, that the progress of improvement implied a censure on those who had previously been in error. On the contrary, I have always understood that there was nothing more creditable than the admission of error." The Professor of Clinical Surgery then expressed, in no obscure terms, his doubt of the truth of the theory of "change of type," and opened the list of improvements in surgery with "the almost entire disuse of bleeding, instead of its nearly constant employment." It is fine to have the hero of a hundred fights in surgery doing battle for modern practice, and admitting two or three excisions other than the one which is *par excellence* his own: ovariotomy; lithotrity; periosteal rhinoplasty; and all but perhaps the latest improvements in modern surgery. For it must be confessed that there are one or two names and things conspicuous by their absence in the elaborate address of Prof. SYME. It shows that the mind of the Professor is in a most peculiar state of "etherization" as to the discovery of chloroform—a state which also renders him quite insensible to the use of pins and needles for certain surgical purposes. But we must, in consideration of the great services of the veteran Clinical Professor of Edinburgh, and of the general excellence of his address, forgive him for some omissions, and allow that for so long a list of improvements it is not remarkable that the best memory should prove too short.

NOT only has political and fashionable "life in London" its season of recreation, but so has metropolitan medicine. If Mayfair is shut up, so are the schools at the hospitals; if Belgravia is out of town, there have been likewise departures from Doctors' Commons. The blinds are down in Savile-row as well as in Piccadilly; and as Westbournia is deserted, so is Brook-street. The squares of Bartholomew's and Guy's are empty and desolate; the theatres of King's and University do not care to "star" it; "good cases" are no longer hunted out from pathological market-places; and assistant officers look wobegone and wretched. Who, alas! can they get to see their out-patients, now that they want to be off to fish, shoot, or get married? Their seniors, too, are threatening demands upon them; for as fashionable patients have flown away, they are about to fly after them. But apart from all desire for mere holiday-making, the doctor has discovered for himself, as well as for those who consult him, that he is the victim of "wear and tear"—that wear and tear, indeed, to which our readers may remember we drew attention a few weeks back,*—and that he also must seek relaxation. It has been said that "all men think all men mortal but themselves." It is certain that the practitioner of medicine has no reason to think so. On the contrary, he knows that the rate of mortality is higher amongst his class than amongst any of the better educated ranks: at least, so CASPER of Berlin tries to prove to him. The fact that some few of us pass the rubicon to a good old age is nothing to the point in question. They are like angels' visits, "few and far between." If the Coan father exceeded a century; if FLOURENS, HEBERDEN, and RUYSCH attained to ninety years; if HARVEY lived to be eighty, and GALEN and CULLEN saw eight years beyond threescore and ten,—the majority of

> "the great masters of the healing art,
> Those mighty mock defrauders of the tomb,
> Spite of their juleps and catholicons,
> Resign to fate,"

and die worn out, used up, or suddenly seized by some infectious malady at the comparatively early average age of *fifty-six!* It was the opinion of HUFELAND that the greatest mortality prevails amongst doctors during the first ten years of their practice. And this is probably correct; for if a medical practitioner outlives that decade, and successfully withstands the noxious influences contingent upon his calling, he may be assumed to have acquired a certain strength of constitution which will carry him on scathless for several years. But, notwithstanding all this, of the three black graces—Divinity, Law, and Physic—the last remains the most mortal; for, according to the authority previously mentioned, the average age at death of clergymen is 65 years; of lawyers, 58; of medical men, 56. In 1861, 315 members of the medical profession died in England and Wales. Of these, one reached, it is true, 95 years, whilst four died when only 23 years old. The average age at death of the whole was only 55 years and 9 months. We see no cause to doubt, then, what CASPER has stated in respect of this subject. Indeed, from all that we know, and from much that we have felt, it is clear to us that neither the fury of politics, the pursuit of legitimate pleasures, the riot of fashionable dissipation, the cares of commerce, the confinement of the counter, nor the struggles of competition, can exceed, if they can equal, in "wear and tear" of the frame that which is the result of the active practice of medicine under the anti-hygienic influences and social responsibilities of a professional career carried on in a great city. Is there no way for the doctor to counteract this "wear and tear," which exists so often to a greater extent in himself than in his patient? Yes, truly, there is, if he can only employ it. He

* Vide THE LANCET July 1st, 1865.

knows full well that if the lassitude of exercise be removed by rest, the feelings of *ennui* dissipated by employment, and the effects of excess be mitigated by abstinence, so the wear and tear resulting from over-stimulation of the human machine is best met by breathing purer air, seeking rural relaxation, and changing mental and emotional worry for bodily exercise. All this and much more analogous teaching he impresses on his patient, and tries to follow it out, to a certain extent, even for himself. And the wiser men amongst us now make considerable endeavours—nay, often no small sacrifices—to snatch a few weeks of change and relaxation at this season of the year. Hence, as we before said, if May-fair goes out of town, so do its doctors. All cannot do so, it is true. The absolute necessities of certain classes of practice, domestic reasons, the *res angusta domi*, &c., too often prevent our brethren from escaping for any time beyond the smoke, dust, and din of the metropolis. Of such as have escaped from the trammels of professional occupation, we would express the hope that the few weeks they have at their disposal are being spent in such a manner as shall not give rise to suspicion that the remedy they have sought may turn out nearly as hazardous as their disease.

A summary of our reasons for this desire may be found well given in the letter of "M.R.C.S." in *The Times* of Thursday, the 17th ultimo. In the remarks there made we entirely coincide, and particularly in the following: that "many tourists in the present season, by their injudicious mode of travelling, and their anxiety to pass over an immense extent of ground, return home to their duties injured instead of being benefited by their holiday. ..... To depart suddenly from habits of moderate exertion to those of excessive fatigue is fraught with danger to health and comfort, which cannot be too strongly impressed upon those who make their holiday a *laborious penance*." The incidents of the present season have unfortunately added to the more insidious and progressive evils of ill-conducted travel and recreation those of sudden danger and fatal results. The slippery precipices and snow-pits of the frozen Alps have this year turned out to be travellers' traps wherein to immure the foolhardy climber. We are not surprised at this *dénouement* to the holiday extravaganzas of the Alpine clubs. It is a transformation scene that comes earlier in the grotesque play, however, than the members expected. Like all enthusiasts, they were blind to their own welfare, though surely a little calm reflection might have shown them that this rushing up and down frozen mountains in ignorance and mist, tied together like a gang of convicts, must some day lead to serious results. And so it has; and, to increase the melancholy reflections which follow this "mountaineering," it has been done for mere talk and boasting. We here leave out of the question the enterprise of such men as FORBES, TYNDALL, RAMSAY, and others, who have passed

"Per aives scopulorumas rupesque tremendas"

for important scientific purposes. Mountain-climbing amidst everlasting snow, with its many dangers, is here necessary, and the enthusiastic history of its results legitimate enough. But that every young town-reared clerk out for his holiday should rush up and down Schreckhorns and Faulhorns under the plea of benefit to his health is a delusion as perfect as it is absurd. Violence of action and suddenness of change are to them certainly not productive of health, and may likely be the source of disease. To follow such a system, then, for mere fashion's sake, is worse than ridiculous. But for some years Englishmen have been bitten with this mania for "mountaineering," especially amongst snow and ice. Berlin and Vienna have now become affected, for they have recently founded their "Alpine club." There are good-natured people who suppose that this crushing through forests and clambering o'er Alps is an enjoyment really as great to an Englishman as an endless bath is to a Turk, opium-dreams to a Syrian, drawing-rooms to a Gaul, splendid rogueries to a Greek, and

"Ein starkes Bier, ein heizender Tobarck,
Und eine Magd im Putz"

to a young Bavarian. No such thing, depend upon it. With ninety per cent. of the persons who stick spikes in their shoes and flourish their alpen-stocks it is not pleasure that prompts their exertions, but merely boasting. Such being the truth, as also that the result that follows may be, if not suddenly fatal, insidiously but surely mischievous, to men of otherwise sedentary habits, we trust the casualties of the season hitherto, and the judicious observations of Mr. WILLS and *The Times'* correspondent may have their effect in arresting this mountain madness which is so widely spreading.

Medical Annotations.

"Ne quid nimis."

STATE OF THE LAW IN RELATION TO INFANTICIDE.

AN unwillingness to change the English laws has long been a characteristic of the English people. True it is that in questions of detail each year witnesses many alterations in form and method of operation; but in principle the law remains the same as that traditionally adopted. In our criminal jurisprudence this is especially manifest. The varying relations of civil life, the complications of our commerce consequent on the progress of science, and the greater facilities of communication thereby afforded, have called into existence many recent statutes for our mercantile arrangements. These are chiefly adaptations of an old machinery to meet the new condition of circumstances. This was forcibly commented on by Mr. Justice Willes in his charge to the grand jury at Wells on the opening of the recent commission in that town. His Lordship then availed himself of the opportunity to contrast the civil and criminal law; and observed that "the judges were bound to administer the latter law strictly as they found it. It was for the Legislature, and not for the judges, to make the law to meet crimes which were unheard of in ancient times, so as to enable the offenders to meet with that punishment which they deserved." While, then, in matters of civil relations "the judges can (as Mr. Justice Willes declared) apply ancient principles to new combinations of circumstances, and thereby to some extent make new laws, in order that substantial justice may be done," in the matter of human life their discretion and authority are limited: proofs, not probabilities—facts, not inferences, alone can warrant a conviction of the guilt of an accused. It may be that this is a wise regulation. Could we always ensure the judicial bench to be occupied, as it is at present, by judges whose learning, honour, judicial purity, personal character, and public spirit specially mark them as the first men of their age, into whose hands the keeping of the country and the safety of society are most fittingly entrusted, it might be a matter of public advantage to permit judicial discretion to pursue in criminal cases the same system as that found to work so beneficially in civil suits. Experience, however, informs us

that even on the judicial bench unworthy men have been found, and that the town of Wells in time long past had Jeffreys presiding at its bloody assize. Admitting, then, that in the matter of human life and liberty exactness in the law is most essential, we are led to the conclusion that amplitude to include notorious offences is equally important. That criminals should escape because there is no law to meet the precise cases, and a great wrong be permitted to go unpunished by reason of technicalities interrupting the course of justice, is a condition of things which the wisdom and experience of the present day can be scarcely expected to tolerate. Yet that such is the case we are assured by Mr. Justice Willes, who particularized one instance in which a person had, through the defective state of the law, entirely escaped the consequences of an admitted crime. The special class of misdeeds which elicited these valuable observations from Mr. Justice Willes were "charges of murder for taking away the lives of young children at or about the time of their birth"—offences which he, the learned judge, "was happy to say had attracted a great deal of attention, but in his opinion not more than they had deserved." In pointing out the defects of the law, so far as it provides against the commission of such offences, Mr. Justice Willes said "he should endeavour to avoid those great enemies to truth—sentiment and exaggeration." We have already discussed this subject in a similar practical spirit with a view to its remedy, and find our suggestions confirmed by the experience of this very learned judge. There is no doubt that, for the punishment of infanticide, the law is at present deficient. Mr. Justice Willes observed, "The law with respect to the concealment of birth applied only to the concealment of the dead body, whereas the real offence committed was, by an act of concealing the existence of the child, to do away with the chance of its living, which it might have had if the ordinary disclosure of the child's birth had taken place."

This Act, 9 Geo. IV., c. 31, s. 14, passed in substitution of the older statutes, is one of many illustrations in which the spirit of the law is narrowed, "cribbed, and confined" by the letter. The words of the section run thus: "If any woman shall be delivered of a child, and shall by secret burying or otherwise disposing of the dead body of the said child, endeavour to conceal the birth thereof," &c. This involvement of the offence of the concealment of the life with the disposal of the body when the life is extinct, constitutes a grave defect in the law. It has been so declared by Mr. Justice Willes, and such a declaration coming from admittedly one of the first lawyers on the Bench promises well for its removal. Proceeding to comment on the imperfections of the statutes applying to infanticide, Mr. Justice Willes further observed:

"Another difficulty was this. It was sometimes impossible to discover whether or not there had been foul play; but in cases where foul play was obvious, where the child had had violence applied to it, it was at present exceedingly difficult to obtain a conviction, either of murder or manslaughter, by reason of the almost impossibility of proving that the child at the time of the coming by its death, was, in the language of the law, 'a reasonable being in the Queen's peace'—a definition which only applied to a child having had entire birth. The evidence failed to establish in the great proportion of cases that the child was the subject of a complete and separate existence."

This condition of the law we have already commented upon. It is one deserving of the most serious consideration, as there is no doubt that the period of parturition is too frequently the occasion on which infanticide is accomplished, when conviction may be impossible from the peculiar circumstances of the case. Mr. Justice Willes well asks, "What were the remedies for defects of this description?" and answers his inquiry by the observation and suggestion, "Of course the Legislature alone could deal with them, and provide a remedy in cases where the evidence did not establish the separate existence of the child;" and he adds, "The Legislature would be well employed in considering whether this should not be a distinct offence, and that there should not be an acquittal on the ground that the evidence did not prove the child to have been completely born, leaving it to the discretion of the judge to direct a charge of murder to be made. He could not refrain from saying that he had seen many cases of suspicion where justice could not be satisfied by a conviction of concealment alone." No doubt can be entertained of the justness of these remarks. It is a very melancholy fact, that in London alone infantile lives, to the extent of many hundreds, are yearly sacrificed. Years have passed since the late Mr. Wakley directed public attention to this fact. Additional experience has but confirmed his remarks. Could we estimate the number of lives sacrificed during the period of utero-gestation, in the act of parturition, and in the first three months of infancy, the returns would astonish even the most enthusiastic disciple of Malthus. Surely it is a question of the highest social necessity, as well as of the first public importance. Mr. Justice Willes believes that the power of the criminal law, however energetically directed, will—nay, from circumstances, must—prove inefficient as a means of prevention. It may render the crime more secret; it will not make it more scarce. We have suggested a way of redress in the recognising the present condition of our social life, with a view of relieving the destitution which frequently operates as an inducement to such crime. We infer that Mr. Justice Willes is of opinion that some means of this character are requisite and advisable. This is our conclusion from the judge's observation—

"He was assured, from what had come to his knowledge, and it was the opinion of those who had applied their minds to the subject, that an administrative remedy might be more effectual than punishment, because it might remove the inducement to commit offences of this description. An administrative remedy might save the country from an imputation which was becoming darker and darker every year."

In these observations we entirely concur. What is this administrative remedy to be? This is a question we commend to the earnest consideration of practical philanthropists. If the present and future object be to preserve infant life as well as to prevent crime, the establishment of Foundling Hospitals will go but half-way. Statistics show that the mortality of spoon-fed infants is scarcely less than that under the present system. Illegitimate children are seldom remarkable for robust health or sound constitutions. Asylums for their support or reception may prevent the commission of crime, but beyond this their efficacy is doubtful. What, then, is the remedy? This is a question we are not yet in a position to answer. We apprehend, however, it must be of a complex nature, which, while it will prevent the inducement to infanticide on the ground of inability to rear the infant, will at the same time provide for the child so rescued such fitting nutriment as may preserve its life. The question is one now happily attracting much attention; the day of its practical settlement cannot be far distant.

GAS AND WATER PIPES.

No one with a nose can be unconscious of the extensive contamination of the soil of all large cities by the leakage from gas-pipes, and the blackened condition of the earth excavated from the street appeals to the eye even when the smell of gas is wanting. We have had numerous instances recorded where the gas has invaded the water supplied to cisterns, and in some cases its accumulation has led to explosions only slightly more dangerous to human life than the slow poisoning constantly going on. The great outbreak of cholera in Broad-street in 1854 was distinctly traced by the late Dr. Snow to the poisoning of the pump in that neighbourhood; and though that outbreak was laid rather to sewage than gas-poisoning, it is not impossible that gas may form an unrecognised element of danger.

Amongst his many other duties, Dr. Letheby, the Medical

Officer of Health for the City of London, makes periodical reports as to the illuminating power of the gas supplied by the different companies; but if he could draw up an approximative account of the gas wasted in poisoning the streets, he would probably startle the public, and would help to explain to the shareholders of the companies where the profits of gas-making go to. In some of the new streets—Garrick-street, for example—subways have been constructed for the passage of gas and water pipes; and here the gas companies are not permitted, any more than the water companies, to put up faulty pipes or leaky joints. Then why, we ask, should they be permitted to do so in the ordinary thoroughfares?

Thanks to a recent opportunity of inspecting the manufacture of iron pipes on a large scale, we are in a position to explain the anomaly. The water companies are, as a rule, willing to pay a good price for a good article, and insist upon a rigid system of testing each pipe by hydraulic power before it is received from the manufacturer. Iron, like everything else, is of different qualities, and it is possible to make cheap and dear pipes; but the cheap will not, as a rule, stand the required pressure, but give out capillary streams of water which would astonish those who imagine every plate of metal to be impervious to fluids. The gas companies, on the other hand, rarely ask for any test to be applied, and, as a rule, look to cheapness rather than efficiency; and it is not surprising, therefore, that the gas permeates the too porous metal. After a time, too, iron of an inferior quality becomes chemically acted upon by the gas, and converted in part into a sulphuret, which is brittle as well as porous, so that the least sinking of the earth in which the pipe is laid leads to a fracture. The rapidity with which this deteriorating process in the metal takes place is, of course, in direct proportion to the impurity of the gas.

Another great source of gas-leakage is the form of joint employed. The majority of gas companies (we believe all the London ones) employ the common "lead joint," the pipes being loosely inserted one into the other and the space filled up with molten lead; but a much more efficient joint is formed when the pipes are "turned and bored"—i. e., when the end of one pipe is made slightly conical, and accurately turned so as to fit exactly into the bored socket of the other; and some gas engineers have combined the two methods with advantage. The expense of the two forms of joint appears to be nearly identical, for the cost of turning and boring is more than counterbalanced by the price of the lead; but turned and bored pipes are of a better quality and dearer, and hence the reluctance of gas companies to employ them. In some of our leading cities, however, gas engineers and companies are overcoming their prejudices, and we may instance Manchester and Liverpool as examples.

One great cause of imperfection in the joints of gas-pipes is the gradual sinking of the earth on which the pipes are laid, so that an undue strain is put upon the joints, by which the lead becomes loosened and displaced. Until all gas-pipes are laid in subways there must be a certain liability to this; but if more care were taken in preparing the foundation for the pipes—as, for instance, by laying them upon concrete—much of the present unwholesome leakage might be obviated. As our drainage pipes are now secure for a few years at least, this would be a good time to insist upon a general overhaul of the gas-pipes, which could then lie undisturbed.

THE CONFERENCE ON CHOLERA.

THE conference on the threatened epidemic of cholera, held last week under the auspices of the National Association for the Promotion of Social Science, ought to lead to some good result. Although the proceedings were extremely desultory, and the majority of the gentlemen who took part in them displayed an astounding inaptitude in appreciating the practical bearings of the subject submitted for discussion, yet the end was not altogether indefinite. The statement drawn up by the standing Health Committee of the Association, and read at the commencement of the meeting, told some truths respecting the habits and habitats of cholera which cannot be too deeply impressed upon the public. The resolutions, moreover, adopted by the conference served to fix the chief facts of the statement more firmly in mind, and to indicate a mode in which the Association may probably act very beneficially in guiding and instructing the public. The resolutions were as follows:—

1. "That the outbreak of cholera in Constantinople, in Egypt, in Malta, in Italy, in Spain, and in Marseilles, and the occurrence of scattered cases of cholera in the metropolis, and also the outbreak in this country of an extraordinary epidemic in cattle, which has often been the precursor of extraordinary epidemic attacks in human beings, must be taken as portending an extraordinary epidemic visitation on the people of this country, which should be guarded against by all means available from voluntary exertion, as well as from the exercise of governmental and local authority."

2. "That, having regard to the known character of the threatened epidemic visitation, and to the course of the previous extraordinary epidemics, it is probable that the great severity of the visitation will be upon the same places, upon the same classes that are now most severely scourged by typhus, dysentery, and the various species of foul-air diseases; and that all well-directed exertions protective of those classes from the extraordinary epidemic, should the threatened attack be spared, will nevertheless be preventive of the so-called zymotic or fermentary diseases which are never absent from the districts chiefly inhabited by the poor, to which nearly twenty per cent. of the ordinary death-rates are due, and an annual sacrifice of approaching to a hundred thousand lives is occasioned."

3. "That in order to disseminate instruction for the guidance of the voluntary exertion which may be needed or serviceable to aid or to supplement the action of the central or local authorities, and to sustain the general public interests in the prevention of excessive disease and premature mortality, this Conference recommends that the active co-operation of the parochial clergy, of members of the Association of Medical Officers of Health of the metropolis, of the members of the Epidemiological Society, of the members of the Society of Arts (who have especially devoted themselves to the improvement of the dwellings of the labouring classes), of the working men's clubs, and other voluntary associations, be invited to make united effort through a joint executive committee, and that the Health Department of the Association for the Promotion of Social Science be respectfully invited to carry this resolution into effect."

We have little doubt that a joint executive committee of the kind suggested might do much good service if judiciously framed, and if its labours be directed to a clearly feasible object. It is obvious that such a committee can be of good only so far as it can influence public opinion; and it is, perhaps, equally obvious that public opinion will only be influenced in so far as the labours of the committee can be directed to a practicable and practical end. That the committee, with any useful result, could discuss or gather information on disputed pathological, therapeutical, or hygienic questions, as was suggested by two or three gentlemen in the course of the conference, is in the highest degree improbable. We apprehend that the labours of the committee will only be of utility so far as they may serve to make better known the great truths taught by previous visitations of epidemic cholera, and the rules of action arising out of them. The experience gained during the epidemics of 1848–49, and 1854, in reference to the measures needed for the prevention of cholera, has left little to be desired. Our knowledge in this respect is perhaps well-nigh as complete as it will ever be. Cholera may be anticipated and warded-off, in temperate climes, with a certainty almost equal to small-pox. What is wanted, at the present moment, is the thorough instruction of the public with this knowledge, and of local governing bodies with the responsibilities arising out of it, and the means whereby they can best discharge their duties. The

task of doing this is one which a committee of the kind recommended by the conference, and working in conjunction with the National Association for the Promotion of Social Science, is eminently calculated to accomplish.

PROFESSIONAL ETIQUETTE.

DAILY experience confirms the opinion we have repeatedly expressed of the necessity of the establishment of local tribunals for determining questions of medical etiquette. We are constantly called upon to adjudicate on cases of this kind, upon *ex-parte* statements, not only from practitioners, but from patients. It is obvious that a judgment arrived at on such imperfect information must, as a rule, be anything but satisfactory. Such a mode of proceeding would not be tolerated in any of our courts of law or equity. It is true that a *mandamus* or an injunction may be obtained on an *ex-parte* statement, but the opportunity is given for a reply, and the costs will fall upon the wrong-doer. There is no such security in medical disputes for placing a wholesome restriction upon the complainant or defendant. The consequence is that much injury may be done to an innocent person by the publication of statements with opinions expressed upon them, and there are no means of punishing the offender. All this might be avoided if the parties interested were to appear before a properly constituted court-medical. Professional disagreements which, from simple mistake, give rise to heart-burnings and enmities, would often on due inquiry be removed. Irate and occasionally vindictive patients might be convinced that they were angry without cause, and law-suits of an unseemly character be avoided. The establishment of courts-medical is necessary in the interest of the profession, and would also be a great boon to the public.

CROWNER'S-QUEST LAW.

A PARAGRAPH in *The Times* of the 24th inst. records an incident which shows for the hundredth time the urgent need which exists for medical knowledge on the part of coroners. At an inquest held by Mr. Bird, at Isleworth, the question to be decided was the responsibility, or otherwise, of a wretch named Dossett, who murdered his wife, and afterwards cut his own throat; and a great deal of vague talk ensued between the coroner and the jury, the former taking rather the view of insanity, the jury, on the other hand, inclining to think that there should have been special evidence of insanity if a verdict to that effect was to be given. The medical witness, Dr. Mackinlay, prudently declined to pledge himself to any general theory that suicide of necessity *implies* insanity. He treated the prisoner's state as an open question, but evidently inclined to the belief that he was sane in the ordinary sense of the word. Eventually an open verdict was returned. The whole business forcibly impresses the medical reader with the absurdity of a system which leaves the practical decision of intricate psychological questions to non-medical coroners and lay jurymen. In this instance it was not the coroner, but rather the jury, whose caution and prudence prevented a verdict in which the insanity of the prisoner would have been either rashly affirmed or rashly denied.

DISPENSARY PHYSICIANS.—At a late meeting of the governors of the Newark Dispensary a resolution was passed, the effect of which is to disqualify physicians actually practising as apothecaries from being elected to the office of physician to the dispensary.

CHORLTON UNION HOSPITAL.—This building is now in course of erection near Manchester. It consists of five "pavilions" or blocks, at a distance of 100 feet apart; each pavilion being 124 feet in length by 24 feet in breadth, with three floors, and to contain 96 beds. To each patient will be allotted 1350 cubic feet of space, which is considerably above the regulation quantity as defined by the Poor-law Board.

The Lancet Sanitary Commission

FOR

INVESTIGATING THE STATE

OF THE

INFIRMARIES OF WORKHOUSES.

REPORTS OF THE COMMISSIONERS.

No. V.

GREENWICH AND LEWISHAM INFIRMARIES.

GREENWICH INFIRMARY.

THE Greenwich Union must be considered as an offshoot of the metropolitan district; it includes the borough of Greenwich, Deptford, and Woolwich, and has a population of 127,670 souls.

The workhouse, erected (in 1840) in the extreme east of the town of Greenwich, and on the river level, is a brick structure, consisting of several blocks arranged in the form of a square, with enclosed yards, which are reserved as exercise grounds for the inmates. The front of the house is on a line with the lower Woolwich-road, and has a north aspect. The site is on a northern slope; the buildings in the rear are on a higher level than those in the front. Except on the south (where there are excellent kitchen gardens, and an open space extending all the way to Blackheath), the whole house is closely surrounded with cottages and other erections. The entire site being below water-mark, the foundations are liable to be flooded; and it can scarcely be doubted that the house must be damp, and that the drainage has great difficulties to contend with. A private sewer has been constructed, and carried into the Thames. The water-supply, which is obtained partly from an Artesian well and partly from the Kent Water-works, is decidedly defective. This is evident on inspection of the wards, many of which have no adequate supply from their own taps, while several (e. g., the lying-in wards) have never been furnished with a water-service at all.

The infirmary is a detached block in the rear of the general house. It is three stories high, and has a north and south aspect. It shares of course in the defects as to site, construction, drainage, and water-supply, which have been mentioned as belonging to the workhouse generally. But its most crying fault is the state of its ventilation; this is something notable. There are eight wards for men, containing eighty-one beds; the average amount of cubic space in these wards, taken together, is but 477 feet per bed, and three of them actually afford less than 450. There are ten female wards, which contain 107 beds; the allowance of cubic space in these, taken together, is but 453 feet per bed, and three wards allow less than 450 feet (one of these actually providing only 393). In short, there is very serious overcrowding. Nor does the construction of the wards in any way tend to remedy this, for there are windows only on one side in some of the wards, and there is no possibility of good through-currents of air; consequently the atmosphere of the wards generally is foul, notwithstanding some attempts at ventilation through the ceilings. The roof-wards are especially objectionable in this respect. Moreover, there is a great deficiency in the number and convenient situation of the waterclosets, lavatories, and bath-rooms; and, in fact, it may be said generally that the external features of the infirmary are decidedly bad. With regard to ward fittings and management, things are better: painting and whitewashing seem to be well looked after, the floors are clean, and the walls adorned with pictures and Scripture texts; the beds are comfortable, and the changes of linen sufficient; and there are water-beds, macintoshes, and

other appliances for cases which need them. The provision for wet and dirty cases is objectionable: the excreta which soak through the straw beds on which such patients are placed collect in a pan underneath; this system must contaminate the air of the ward, and be detrimental both to the subjects of it and to those around them. A blanket, with sponge and charcoal placed in contact with the patient, would absorb the offensive matters and destroy their effluvium.

The nursing arrangements are very improper, there being no paid nurse, except for the insane, throughout the whole establishment, although there are 198 beds in the infirmary, and over 200 other cases under medical treatment. There are twenty-six pauper nurses, of ages varying from thirty to seventy-six; they are distinguished by a special dress, and have allowances of tea, sugar, meat, and beer daily, and occasionally gin, but get no money payment. Sixteen of these do the whole duty of the infirmary *by day and night*, sleeping in the wards to which they are attached. Thus there is no night-nursing properly so called. It is right to say that as much care as is possible seems to be taken in selecting the fittest of the pauper inmates for the duties of nursing.

The whole medical care of this large establishment devolves on a single medical officer, Mr. Sturton, who receives for the regular charge of 400 patients (and practically of many more), besides attendance on 60 midwifery cases yearly in the house, a salary of £200, out of which he has to find all drugs, except cod-liver oil and quinine. As a necessary consequence of his great overburdenment with work, it is impossible for him to carry out an adequate classification of patients. He visits the workhouse twice daily, except on Sundays, when he visits once.

Under the head of classification, the most important matter is the arrangement of the insane cases. Of these there are ninety-one females and about thirty males; the former under the care of two special female nurses, with salaries of £20 and £15 respectively; the latter under the charge of one paid male nurse, with a salary of £30. There are a padded room and a dark chamber for purposes of seclusion. The wards are in many respects good, and there are many humanizing appliances (such as pictures, books, birds, and a bagatelle-board) to soften as far as may be the hardship to the poor patients of detention in such an establishment; but these arrangements must after all be considered very inferior to the advantages of a country residence, where pure air and an open prospect, together with proper out-door employment, would bring solace and health to many who are denied them under present circumstances. A very objectionable arrangement is made for the idiots, who are lodged in the lower wards of the infirmary; these are totally inadequate, we do not hesitate to say, to their wants, if the guardians, as we doubt not they do, desire them to recover. Of all cases which demand our sympathy and care, surely none are more worthy our best efforts to ameliorate their condition than those of the poor creatures whom Providence has thus sadly afflicted. The day has gone by for regarding any such as hopeless, and it is the duty both of guardians and ratepayers to confer on these unfortunate beings every appliance which promises to effect amendment.

The fever and small-pox cases are sent, in compliance with the now almost universal custom, to the respective hospitals in carriages belonging to the house; and so far as this plan is an acknowledgment of the necessity of isolation of contagious cases its principle is good. But the removal to a distance, especially such a distance as London, is a most objectionable practice, as tending seriously to impair the patients' already feeble powers; and there can be no doubt that the guardians are bound to erect a fever house of their own.

Itch cases are treated in a summary, effective, and economical manner. The experience of Mr. Kilby, the master, has taught him that one-half the tramps have this disease; and he suggests that if the masters of workhouses were allowed to treat these cases, the present universal prevalence of itch would cease. He gives his patients a bath as hot and as long continued as can be borne, dries the skin, and then paints it with the following lotion: Sulphur, eight ounces; quicklime, four ounces. Boil in a quart of water for two hours, stirring constantly with a piece of wood; make it up to a quart again; keep the bottle corked.

Syphilis is treated in a special ward; in addition to which the Government provide twenty beds in the Lock, London, in recognition doubtlessly of the claims of Woolwich as a naval depôt.

On the subject of dietaries we speak at present with reservation, except as regards those of the sick. In this respect every liberality is exercised, the medical officer having full control. The house diet for adults includes 18 oz. of meat, 89 oz. of bread, 14 pints of gruel, 2 pints of peasoup, 3 lb. of potatoes, 28 oz. of pudding, and 3½ oz. of butter, *per week*. The No. 2, or "full" diet for the sick, includes 6 oz. of cooked meat (without bone), 1 lb. of potatoes, 12 oz. of bread, 1 oz. of butter, and 2 pints of tea, *daily;* but no beer without a medical order. Adults over sixty have tea and cocoa instead of gruel, and extra butter; no beer unless ordered. Children from two up to twelve years have one pint of milk daily, and quantities of meat, bread, and potatoes proportionate to the adult standard; but no butter (a great defect). Infants appear to be liberally treated, as far as we can judge from their nominal allowance.

The diseases chiefly treated in Greenwich Infirmary are those of old age, rheumatism, ulcerated legs, and phthisis, two-thirds of the cases being the last-mentioned disease. Many years ago dysentery was epidemic in the house, and it was said to have depended on the dampness caused by unnecessarily frequent washings of the floors; but it is more likely that the natural dampness of the situation (joined, perhaps, with other sanitary defects) was the true cause. The mortality is about 250 per annum.

Finally, we may mention one special point, because we can give the guardians deserved praise for it—viz., the existence of twelve separate bed-rooms and two common sitting-rooms, in a detached building devoted to aged married couples—an arrangement which reflects great credit on the establishment.

In concluding this report, we have to tender our special thanks to the medical officer and to the master for the kindness with which they supplied us with most valuable information. And now we will carefully define the points in which we take objection to the Greenwich Workhouse and its infirmary:—

1st. The site and construction of the house are irremediably bad, and it ought not to be used as a residence by any but healthy persons. But if the present site is to be retained—

2nd. The children (about fifty in number) require enlarged accommodation, and should have the insane wards given up to them, the lunatics and idiots being removed to the country.

3rd. In this and in other ways the overcrowding ought to be immediately remedied. At the time of our visit the workhouse contained 906 inmates, an excess of more than 100 over even the original very improper estimate of accommodation.

4th. The water-supply is so defective that either an unlimited contract should be entered into with the company, or steam-power should be employed for raising the water to the upper floors, and hot-water taps laid on everywhere.

5th. The roof-wards should be raised to the height of at least ten feet, and additional windows placed in them.

6th. The medical attendance is quite inadequate. Nominally about 400, but practically nine-tenths of the inmates (who number about 1000 souls), are under medical care; as a proof of which, rarely more than 100 in the entire house dine in hall, claiming that exemption on the ground of illness. At least three persons, one of whom should be a resident dispenser and house-surgeon, are now necessary to do the work which is thrust upon one officer. All payments for drugs ought to be made by the guardians.

7th. A staff of paid and trained nurses is absolutely necessary.

8th. The want of a parish fever-house is a gross abuse that ought to be instantly remedied.

9th. Lastly, the infirmary, if it is to continue in this neighbourhood, and to supply the wants of the Union, ought to be immediately rebuilt on modern principles, and on a much larger scale.

We trust that the guardians may listen to our suggestions. Should they decline to recognise the very serious responsibilities which rest upon them, they will fail to carry out what was doubtless the true intention of the framers of the Poor-law—viz., the promotion of true economy by means of a high-minded and liberal policy. We are glad to observe an absence of some of the coarser defects of the worst workhouses. But after all, nothing can be much more unsatisfactory or discreditable than a workhouse in which 400 patients are treated by one underpaid medical officer and no paid nurses, while the ventilation and the water-supply are altogether defective and bad, and the most dangerous overcrowding is allowed to exist.

LEWISHAM INFIRMARY.

This workhouse is situated in the centre of the picturesque village of Lewisham, five miles south-east of London. It is a three-storied brick building of three blocks, and was erected in 1817. The centre has a south aspect, while the front of the house looks east; the parallel wing being in the rear with a west face. The entire house represents three-fourths of a square, leaving a considerable space towards the south for airing ground, and which, being paved, forms two good yards for males and females respectively. The original plan has been, however, marred by the erection of several low buildings on the south, and which more or less obstruct the free circulation of air through the entire structure. In the rear are well-cultivated kitchen-gardens, yards for work, laundry, and other purposes, including separate erections for infectious cases, and a dead-house. Still further west is the Ravensbourne,* in whose valley lies the entire village. Until recently, when the metropolitan sewers were completed, there was an eastern branch of this river running the whole length of the village on the west of the main road, and which favoured an excess of moisture; its removal has proved signally beneficial to the locality. Springs abound in the neighbourhood; and one, Lady Well, has long had a considerable reputation as a chalybeate. Clay forms the mass of the subsoil, and as such extends up to Sydenham, a chapelry of the parish; in the north, however, extending to Blackheath, chalk and gravel, with peat, abound.

The union consists of seven parishes, with a population of 65,757 persons. The house, which is the property of the parish, is rented by the union at an annual charge of £350, and was built for 300 inmates. The drainage is good; the water-supply (from a well in the yard) defective. On the occasion of our visit there were 180 in residence; and we were most obligingly shown over the house by Mr. Want, the master, who appeared to us fully alive to his duties and responsibilities.

With the exception of the infection wards, four in number, in a detached building in the yard, there is no proper classification. Sick, infirm, and able-bodied—so called at least, but we saw none in the entire house—were placed in close approximation. The sandwich fashion obtained, showing at least a complete want of organization and method.

The sick wards are seven in number: three for males, containing thirty-three beds, and allowing an average of 494 cubic feet per bed; and four for females, containing thirty-nine beds, and allowing an average of 489 cubic feet; besides four infection wards, containing twenty-two beds, with an average cubic space of 539 feet. There can be no doubt that, were these wards filled, the accommodation would be very deficient (though not seriously below the Poor-law Board's standard), and that the infectious cases in particular would be very badly off with only 539 cubic feet per bed. Practically this need not be of much consequence, as the house, which was built for 300, is never filled, and, at the time of our visit, contained, as we have stated, only 180 inmates; but in several wards the neglect of the most ordinary precautions made the atmosphere very foul. In many respects the wards are commendable. There is great attention paid to cleanliness of floors, walls, windows, &c.; there are pictures, texts, and suitable books in plenty; and the bed furniture is sufficient and good. But there is one cruel piece of neglect—viz., the excessive shortness of the iron bedsteads, which are only 5 ft. long by 2 ft. 3 in. wide! Towels, and the other appliances for washing the sick, are well arranged and well supplied.

In the presence of much that was deserving of praise in the style of management, we were surprised to find in several wards a total absence of waterclosets, and to be told that the inmates had to pass along an entire range of buildings to obtain the accommodation.* There was the same absence of lavatories and baths; indeed, no individual ward had its own exclusive closet, lavatory, or bath. There is but one, and that a movable, bath in the house, and no hot-water apparatus; so that a bath being wanted, water must be specially heated and carried to the ward in which it is required, and this to the annoyance and discomfort of the rest of the ward-patients.

The condition of the patients—chiefly persons advanced in life, and suffering from the diseases of old age—appeared very satisfactory; and when spoken to, many of them, in language as emphatic as truthful, expressed gratitude and thankfulness for what was done for them. We saw a good supply of macintoshes, and other appliances indicating more than usual regard for the comfort and well-being of the poor. Cards over the beds, giving name, age, disease, and treatment, have not yet reached this suburb; we trust, however, that the medical officer will accept our suggestion, and resort to them as a valuable help in hospital management.

The care—domestic, at least—of the sick (and we saw few in the house who could very properly be removed from this dependent category) is committed to the matron (the wife of the master), one paid nurse, and thirteen pauper helps. The whole of the latter appeared to us admirable objects of one's sympathy, but without exception disqualified, physically and morally, for the responsible duties of nursing the sick—fit rather to be nursed themselves; the paid nurse, after many years' faithful service, justly entitled to a pension; consequently, in our judgment, the only reliable aid left to carry out the directions of the medical officer is the matron, whose other duties as mistress of the house must consume her time and exhaust her energies. Hence it must follow that the sick and infirm are wanting in proper care and hospital appliances. We would therefore suggest the appointment of properly qualified and well-trained nurses to meet the wants of the different classes of sick and infirm; all of whom might act under the direction of the matron, herself guided by the medical officer.

The various kinds of food and the methods of cooking are in most instances good and commendable. We tasted both the beef and mutton, which were well dressed and wholesome; also the potatoes, bread, ale, and porter, all of which were really good; and the quantity served out to each individual was abundant. For the really sick, however, we would suggest *roast* meat occasionally, instead of boiled. To boil meat is to abstract a large amount of its nutritive qualities, and, unless the broth is drunk with the meat, the recipient is thus deprived of what really belongs to him. At very little additional cost roast meat might be given in turn with boiled. Beef-tea (and really good we found it), arrowroot, milk, and extra tea are given out when asked for, without the need of a medical order: a practice which we commend very strongly, and which we should be glad to see introduced as a common practice into all our workhouse infirmaries.

* Associated with our immortal bard.

* We are glad to say that the guardians have, since our visit, removed this objection to a great extent, and made other valuable improvements at considerable cost, especially with regard to the baths, &c. Our labour has not been in vain!

The medical officer, Mr. Hugh Stott, who is also surgeon to the district of Lewisham, is expected to visit the house at least four times a week, and daily when summoned. He supplies all the drugs except cod-liver oil and quinine, and compounds for both in- and out-patients, receiving for the whole of these duties about £105 per annum. On the books we found about ninety patients in March, and sixty-seven in May. One case of scarlet fever was being treated in the infection wards, which are in many of their relations good. The number of midwifery cases in the house averages about eight in the year, which are attended by the paid nurse—nominally, however, by the medical officer, and for which he is paid at the rate of 10*s.* 6*d.* per case.

The inferences we arrived at respecting the medical officer are that he has almost, if not practically altogether, unlimited control over all the arrangements for the sick; that the guardians are really most liberal, and, if well managed, may be induced to do whatever is for the good of the inmates, guided by the medical officer. The latter gentleman can order a liberal diet, and any and every appliance that may be needed for the sick; and he can also ask for any change in the arrangements which his experience suggests as desirable, with a good prospect of obtaining his request. Consequently, if the most enlightened principles of hospital treatment which are now accepted in the profession are not carried out, we must suppose that the blame rests chiefly with the medical officer. It is true that his salary is utterly inadequate, and his whole position a false one; but this has nothing to do with the obligation to urge on the guardians improvements which are of vital importance to the sick.

As already stated, the type of diseases which prevail at Lewisham Union is chiefly characteristic of old age and declining powers: chronic cough, paralysis, and sore legs, with some few cases of phthisis, include nearly all. We carefully examined the medical records, and could find no trace of any epidemic. Formerly skin diseases prevailed in the house, when it was crowded with children; it was then remarked that all children who came into the house contracted a form of scabies, that treatment did little good, but that on sending the children away into the country the disease almost immediately disappeared. At present there are no children kept here, and the disease has never appeared in the adults.

The mortality of 1863 was 35; that of 1864 was 45—a high death-rate, which, however, depends chiefly on the accidental circumstance that many inmates enter the house in a dying condition.

The details we have given justify, we believe, the position which we gave to Lewisham in our General Report*—as capable, with certain important modifications, of developing into a really good and well-conducted hospital. The grounds for this hope are the facts of its desirable situation and the composition of its board of guardians; for the latter, we are convinced, are truly liberal in disposition, and where they err, do so in ignorance. We trust that they will accept the following suggestions for *indispensable* reforms:—

1. The wards require additional light and ventilation in several instances.
2. Closets, lavatories, and baths, with a copious water-supply, are needed for every individual ward.
3. Rigorous classification of cases ought to be adopted.
4. A proper staff of paid and trained nurses is required.
5. Finally—and this is the most important thing of all,—the guardians must break through the degrading traditions according to which they arrange the status and pay of the medical officer. When that official shall be relieved of the improper burden of supplying and of dispensing drugs—shall be decently paid, and encouraged to assume the grave and honourable responsibilities of a regular hospital officer, as he should be, there is little fear but that he will speak his mind freely to the guardians, and by his scientific advice save them from the scandal of ruling over a workhouse infirmary which, though good in some respects, has some deficiencies which must appear little less than barbarous at the present day, when everything connected with the knowledge of hygienic laws is assuming so great an importance and so extensive a development.

* See The Lancet of July 1st, p. 17.

A Remarkable Case of Assault.—The Droylesden magistrates have inflicted a fine upon a surgeon and public vaccinator, for vaccinating a child of seven years of age without the consent of its parents. Similar charges on other cases were threatened, but withdrawn on payment of expenses.

THE CATTLE PLAGUE.

As the history of the cattle imported from Revel to Hull becomes more accurately known, the probability of steppe-murrain having been introduced into the kingdom by this herd increases. The animals, it appears, were landed at Hull on the 29th of May—not the 23rd, as asserted in our last impression. One hundred and seventy-five were sent to London, reaching their destination on the second day after landing; and divers of these were exposed for sale in the Islington market on more than one occasion between the 1st and 15th of June. Several of the original herd became sickly and were excluded at Revel. The history of the health-condition of the remaining animals up to the time of their landing in England, and after their dispersion in our markets, is still insufficiently cleared up. The ordinary period of incubation of steppe-murrain is from five to ten days (Professor Simonds states from seven to fourteen days). The animals in which the epizootic was first recognised in the metropolis were bought in the Islington market on the 19th of June. There is an important link in the evidence still wanting; but the broad fact remains, that steppe-murrain, after being absent from this country for nearly a century and a half, is again developed, apparently within a few days subsequently to the landing of the first herd of Russian cattle collected in and directly imported from districts infected with the disease.

The caution given in our columns a fortnight ago, not to confound the Siberian boil-plague with the steppe-murrain was not uncalled for. *The Times* of the 18th inst. published an extract from an official report to the Prussian Government on the former plague. In an editorial article our contemporary (its example being followed by other daily journals) fell into the error of supposing that the epidemic described in the Prussian report was the form of murrain supposed by veterinarians to have been introduced into this kingdom. Indicating the manifest differences between the boil-plague and the epizootic now amongst our herds, *The Times* drew a conclusion in favour of the spontaneous origin of the latter. The error doubtless arose from both forms of murrain being often styled popularly, "the Siberian Cattle-plague."

We have been favoured by Dr. Murchison with the following account of the morbid appearances found in the carcases of cattle which have died from the present murrain in the London dairies:—

On the Anatomical Lesions of the Cattle Plague now Prevalent in London. By C. Murchison, M.D.

During the last few weeks I have dissected a considerable number of cattle which have died of the present epidemic disease, in all its stages. Although my observations are not yet ready for publication in detail, a brief notice of the principal morbid appearances which I have found will at the present moment not be devoid of interest.

The main anatomical characters of the disease, according to my observation, are catarrhal inflammation of the lining membrane of the respiratory passages, of the digestive canal, and, in fact, of the mucous membranes generally, a more or less fluid condition of the blood, and ecchymoses or hæmorrhages in various parts, such as beneath the skin, beneath the mucous membrane of the stomach and bowels, beneath the endocardium, and beneath the arachnoid on the surface of the brain. The parts which are most altered from their healthy condition vary considerably in different cases.

The lining membrane of the nasal passages, and more particularly of the windpipe and bronchial tubes, is almost invariably much inflamed. The mucous membrane is more or less reddened, and its surface is coated with a viscid fluid and with numerous soft membranous flakes of yellowish exudation, some of them an inch or more in diameter. These flakes are easily scraped off from the subjacent membrane, which often

presents a raw or excoriated aspect, but never any appearance of an eruption on the surface, or of submucous deposit. The bronchial tubes are often filled up with frothy mucus and with the inflammatory products thrown off from the mucous membrane, but the lungs and pleuræ exhibit little congestion, and no sign of inflammation, except as occasional complications.

The mucous membrane of the digestive canal is inflamed throughout, but in some parts the inflammatory signs are more intense than in others. On scraping off the thick layer of epithelium from the first two stomachs, which is done with abnormal facility, the subjacent membrane is found to be intensely red. The mucous membrane of the third stomach, or *omasum*, is still redder, and often presents patches of ecchymoses. It is in the fourth stomach, or *abomasum*, however, that I have found the inflammation most advanced. Here there is not only intense redness with much adhesive mucus on the surface, but the membrane is studded with numerous minute superficial ulcers, like those erosions which are so common in the ordinary catarrhal inflammation of the human stomach. In addition, the membrane often presents extensive patches of claret-coloured discoloration, apparently due to submucous extravasation. These patches are often surrounded by a distinct fissure in the mucous membrane, and, in some instances, the mucous membrane corresponding to the patch is in a gangrenous state, and more or less detached.*

The small intestine is more or less inflamed throughout, but the inflammation is usually most intense about the middle. The coats of the bowels are much attenuated and softened, while the mucous membrane is intensely injected, and sometimes ecchymosed and deprived in a great measure of its epithelium covering, but coated with a quantity of transparent and viscid, or opaque and puriform, secretion. I have failed to discover any change of the solitary glands of the ileum which could be ascribed to the disease. Peyer's patches are usually less vascular than the surrounding mucous membrane, and throughout the disease very much less elevated and thickened than in a healthy animal. Their component glandules are more distinctly seen, because the epithelium covering, which obscures them in health, has been mostly removed. Many of the glandules seem empty, while others contain a minute drop of softened secretion like pus, which can be squeezed out by the slightest pressure. There are no submucous deposits, and none of the lesions running through the definite stages, which I am familiar with in the typhoid or enteric fever of man. In this opinion I am corroborated by Dr. A. P. Stewart, Mr. Simon (Medical Officer of the Privy Council), Dr. Buchanan (my colleague at the Fever Hospital), Dr. J. Burdon Sanderson, and many other physicians who have dissected the animals, either in conjunction with me or independently.

It is right to mention, however, that in all the cases which I have examined, many of the solitary glands, and sometimes certain of the component glandules of Peyer's patches, have been greatly enlarged, filled with a soft cheesy matter, and sometimes even ulcerated on the surface. A drawing of an inflamed piece of bowel studded with these enlarged glands might readily be thought to represent the lesions of enteric fever. Careful examination, however, clearly shows that the appearances in question are of old standing, and quite unconnected with the disease of which the animals have died. This view of the matter is confirmed by the fact that I have found precisely similar appearances, in some cases indeed even more strongly marked, in the small intestines of every one of four healthy oxen which I have examined. I remember, also, Professor Goodsir of Edinburgh describing this common condition of the intestinal glands in cattle, in his lectures on Comparative Anatomy, nearly twenty years ago.

The lining membrane of the large intestine is also inflamed. It is always more or less reddened, the redness being greatest over the prominences of the rugæ. Here also may be seen patches of ecchymoses, and sometimes superficial excoriations. The surface is coated with a quantity of viscid mucus, more or less opaque, and often mixed with blood.

The contents of the bowel are fluid, and consist of fæces mixed with inflammatory products and often with blood.

The vagina, bladder, and urinary passages often, but not always, present signs of inflammation. The kidneys are often intensely hyperæmic, and the uriniferous tubes gorged with finely granular epithelium.

The liver and spleen appear healthy. The bile is thin, and of a light-green colour. The mesenteric glands contain none of the abnormal deposit met with in the enteric fever of man.

The tissue of the muscles presents no alteration of its microscopic structure.

Lastly, it is worth mentioning that in several animals suffering from the disease, which had been killed, the diseased organs appeared to me to be returning to a healthy condition; and that from personal observation I am satisfied that many animals are now condemned, and sent to the knacker's yard, which are suffering from maladies totally different from the prevailing epizootic.

It will not be without interest to compare Dr. Murchison's observations with Guersent's account, written about 1815, of the anatomical lesions found in the "contagious typhus of cattle" (steppe-murrain, rinderpest).* He writes:—

"We bring together here the various alterations which are met with when the carcases are opened, as we have previously included in one description the different symptoms which have been most commonly observed. The conjunctivæ and the nasal membrane are nearly always red, or of a violet colour approaching black. The membrane of the mouth and its continuation in the pharynx is very often of the same colour, and sometimes studded with aphthæ or little ulcers, as already indicated. The mucous membrane of the manyplies and rennet-bag, and sometimes even of a portion of the intestine, is red and swollen, as is ordinarily observed in adynamic inflammations. The mucous membrane of the manyplies is particularly of a deep violet-red or black, and is easily detached from the muscular layer. This is principally observed in animals which have been treated with heating medicaments. The membrane then frequently adheres so strongly to the dried aliment that it is torn in attempting to remove the latter. The mucous membrane of the bladder, and even of the ureters and pelves of the kidney, is often very red. The vulva in cows is sometimes swollen, and the interior of the vagina participates in this general state of phlogosis of the mucous membrane.† M. Dupuis observed in the last epizootic that the intestinal canal, very red in a part of its extent, contained thick mucus like the white of an egg. He remarked also, once only, a species of aphthæ, or of little pustules analogous in form to those of variola, and which were disseminated in the larynx, and over the entire internal surface of the small intestines, the mucous membrane of which was swollen and thickened. The serous membranes of the chest and abdomen never appear to be essentially affected in the contagious typhus of cattle, although different authors have often indicated gangrenous spots upon the pleuræ, diaphragm, lungs, liver, spleen, and intestines. But these spots are commonly due to ecchymosis or extravasation of a very black venous blood beneath the serous membranes, and rarely in their tissue: they have never the character of decomposition proper to true gangrene. The examination of the nervous system, still imperfect, has particularly occupied the attention of Professor Dupuis, and in many autopsies made during the epizootic of 1795 and during that of 1814, he has constantly observed as follows:—'The spinal marrow softer and more injected than in the natural state; the pia mater, often a little redder, contains between its duplicatures a great quantity of limpid and transparent serum. This serum is so abundant, especially towards the lumbar region, and the medullary substance is in this place so much softened, that the latter is

* Mr. Simon informs me that he has found these appearances most marked in the *omasum*.

* Dict. des Sciences Médicales, Art. Epizootie.

† A swollen condition of the vulva, with deep redness of the vagina and thick mucous secretion, has been pointed out to us by one cowkeeper in the present cattle plague in the metropolis as one of the clearest diagnostics of the disease.

reduced on being touched into a kind of pulp, and judging solely from the state of the spinal cord, a species of hydrorachitis would be thought probable. The cellular tissue of the lumbar and sacral nerves, where they join the spinal cord, is ordinarily gorged with sanguinolent serum, and in a cow observed in 1795, the nervous filaments were sprinkled with very small black ecchymoses. The brain, in animals dead of typhus, is not nearly so soft as the spinal cord. Most frequently it appears to be healthy; sometimes, nevertheless, it is more injected, and the meninges are also redder. The ventricles are also very often filled with an abundant, and sometimes lemon-coloured, serum.' M. Dupuis has seen in one case the arachnoid sprinkled with little black ecchymoses in the folds which this membrane forms between the convolutions of the brain. He has observed the same alteration upon the plexus choroides. Vicq d'Azyr has only twice seen the cerebral substance softened and yellowish; but the alteration was without doubt accidental and foreign to the principal malady. The state of the spinal cord is that which is most constant and remarkable in the nervous system in animals dead from typhus. As to the organs of the circulation and of respiration, they do not present, ordinarily, anything particular, unless there is some inflammatory pulmonary or pleural complication. Nevertheless it is nearly always observed that the blood is in small quantity, is black, fluid, and without albumino-fibrinous concretions. The heart is generally soft, and sometimes studded, even in its ventricles, with a species of ecchymosis formed of a black blood, poured out beneath the proper membrane or in the surrounding cellular tissue. The bronchiæ are often filled with sanguinolent mucus; and the mucus which covers them is ordinarily very red. Unless pneumonia be present, the lungs are nearly always healthy; nevertheless Vicq d'Azyr, doubtless in a complication of this nature, asserts that he has sometimes seen portions of the lungs gangrenous. M. Dupuis has also observed in many carcases an infiltration of air into the tissue of the lung. The veins at the base of the brain sometimes contain air; the respiration in these animals had been difficult. The liver and the spleen are commonly softer and fuller of blood than in the natural state; the gall-bladder is nearly always very much dilated with liquid and yellowish bile. The kidneys have never exhibited any marked change. All the other abdominal organs are generally in a healthy state, with the exception of the changes described in the mucous membranes, and ecchymoses sometimes observed on the surface of the different organs beneath the peritoneal membrane."

The correspondence between the lesions described by Guersent and those observed by Dr. Murchison is of the closest character.

THE PROGRESS OF CHOLERA.

CHOLERA has appeared, or has been notified as existing, in several fresh places since our last impression—namely, Beyrout, Salonica, Canea, in Crete, Kustendjie, Galatz, Sulina, San Nicandro, Apricena, and San Marco, in Italy, Barcelona and Valentia.

From Beyrout there is merely the news of the disease prevailing there, although not in a virulent form.

At Salonica a large number of deaths from cholera is said to have occurred, and the epidemic is on the increase.

Four deaths are reported from Kustendjie, but it is not stated whether they have been among the local population, or among fugitives from Constantinople and the Bosphorus.

News from Galatz states that a few cases of cholera had happened among a detachment of soldiers stationed at Tontcha, and recently arrived from Constantinople. The disease had not extended to the civil population.

At Sulina there had been two deaths from cholera, and the panic among the inhabitants was such that business had well-nigh come to an end.

The cases at Canea, few in number but some fatal, had taken place in the Lazzaretto at Suda Bay, among passengers arrived from Alexandria. The outbreak had not spread beyond the quarantine premises, and as no fresh cases had occurred since the 17th of July, clean bills were now issued.

The alarm at Barcelona, reported in our columns of last week, is now said to have arisen from several scattered cases of cholera having occurred in the city, but that these are neither more numerous nor more fatal than occur every year.

A like alarm is stated to have arisen from a similar cause at Valentia.

A few cases are reported from San Nicandro, Apricena, San Marco, in Lamis, Italy.

Until further news, then, Canea, Galatz, Barcelona, and Valentia may be excluded from the districts in which epidemic cholera has appeared, and probably also Sulina.

There is no additional news from Marseilles, and it is to be presumed that the disease is not at present extending there.

The civil population of Gibraltar, within the walls, still remains uninfected. Six or seven cases of cholera have occurred among the troops since the 19th of July; and a child is reported to have died from the disease on board a lighter in the harbour. The health of the population is said to be unusually good.

There are no reports from Malta since the 10th inst.

At Ancona the epidemic appears to be steadily decreasing. From noon on the 14th to noon on the 16th, 108 cases occurred and 22 deaths; from the 16th to the 17th there were 42 cases and 8 deaths, plus 24 deaths from previous days; from the 17th to the 18th 39 cases and 37 (?) deaths.

At San Severo, from noon on the 14th to noon on the 15th, 59 cases were reported and 17 deaths; from the 16th to the 17th there were 70 cases and 37 deaths; from the 17th to the 18th 92 cases and 32 deaths.

At Constantinople on the 7th inst., 956 cases occurred and 363 deaths. The next two days no reports were published, a measure which tended to magnify rather than allay the terror of the population.

Returns have been received from Smyrna from the 29th of July to the 4th of August inclusive. They are as follows:—

	Deaths from cholera.
July 29th	42
,, 30th	56
,, 31st	52
Aug. 1st	38
,, 2nd	26
,, 3rd	33
,, 4th	38
Total	285

The destitution of the poorer population in this city is heart-rending. Appeals are made to England for aid. Mr. Cumberbatch, the English consul, has set a noble example. He feeds in his own garden daily about 280 old women, who cannot contend for food in the general dole to the population.

During the week preceding the 9th of August, two or three cases of cholera occurred in Alexandria. The outbreak appears to be all but exhausted. From the 12th of June to the 3rd of August, the total mortality from all causes in the city was 5889; from cholera, 3925. The epidemic began to diminish on the 4th of July. Then westerly and north-westerly winds began to blow. On the 8th the northerly winds became settled, and violent and continued gales purged the atmosphere. On the 21st the number of deaths from cholera fell to 10; and on the 2nd of August to two.

It may be well to mention that a case of cholera has occurred on ship-board off Trebizond; and two cases on ship-board off Fiume.

The progress of diarrhœa and sporadic cholera in London since the twenty-second week of the year, is as follows:—

Week ending	Diarrhœa.	Sporadic cholera.	Mean temperature.
June 3rd	38	1	58·3°
,, 10th	44	1	63·6
,, 17th	93	3	57·8
,, 24th	187	11	61·1
July 1st	184	11	59·5
,, 8th	301	12	66·1
,, 15th	267	11	61·4
,, 22nd	280	18	63·6
,, 29th	252	23	66·0
Aug. 5th	207	19	55·9
,, 12th	201	11	62·0
,, 19th	116	12	—

On the mortality from diarrhœa in the metropolis during the past week, the Registrar-General remarks:—

"It is satisfactory to observe that the mortality from diarrhœa in London exhibits a great decrease. In each of the first two weeks of the present month the deaths from this disease were above 200; in the last week they declined to 116. The average number for the corresponding week in the last ten years is, with a correction for increase of population, 209. In the week that ended Aug. 20th in 1859, the deaths from diarrhœa were 240; in the same week of 1864 they were 242. Besides the deaths enumerated as caused by diarrhœa, 12 cases, of which 4 occurred to adults, were referred to cholera or choleraic diarrhœa. In St. George's-in-the-East, at 64, Hardinge-street, on Aug. 15th, the wife of a working lighterman, aged twenty-seven years, died of 'Asiatic cholera after twenty-four hours' illness.'"

QUARANTINE.

(FROM A CORRESPONDENT.)

THE present time affords a favourable opportunity to watch the operation and results of quarantine as it is now generally carried out on the Continent, with the presumed object of providing a defence or safeguard against the transmission and spread of certain epidemic diseases. There has hitherto been so much difference of professional opinion in respect of this important subject of State medicine, and this difference of opinion has given rise to so many unseemly disputations among those to whom the public naturally looks for guidance, that it obviously behoves every intelligent physician to make himself acquainted with the more prominent facts bearing on the questions which are presenting themselves from day to day. The reader of the daily journals cannot have failed to notice the course and progress of the cholera during the last two months: the first reports of its outbreak in Alexandria in the second week of June (nothing seems to be known of the previous health-state of the country), its speedy appearance in other parts of Lower Egypt, and its subsequent manifestation at various points of the Mediterranean shores, such as Jaffa and Beyrout, Smyrna and Constantinople, Cyprus and Malta, Ancona and (it has been alleged) Palermo and Catania, in Sicily, &c.

From the earliest rumours of the existence of the pestilence in Alexandria, which has now so large an intercourse with many different countries, quarantine measures were at once adopted in almost all the ports of the Mediterranean, in the hope of excluding, if possible, the dreaded disease. That these measures have not succeeded is but too obvious, by the mere enumeration of places just given. To what this failure is due—whether from delay in the establishing of quarantine and its inadequate stringency when adopted, as some may be disposed to allege, or from the very nature of the pestilence, whose material cause is too subtle and diffusive to be arrested by artificial attempts at exclusion—it is no purpose of the present communication to discuss. It is to the facts, and not to their *rationale*, that I would now direct attention. Many of the incidents connected with the carrying-out of the measures in different places are, to say the least, very strange in this enlightened age of ours. In Sicily, vessels crowded with passengers, all in perfect health and without having had a case of sickness on board during the voyage, have not only been refused admittance into the port to which they were bound, or any communication with the shore, but have been compelled to quit the coast, under threat of being fired into if any attempt was made to land. Malta at first established quarantine against Alexandria to keep the enemy out; and when this failed, and the disease had found its way in among her population, the tables were straightway turned upon her, and Alexandria, though still infected, put her in quarantine *en revanche*. Again, a quarantine detention of ten days at least is at the present moment enforced in the Dardanelles on all arrivals from Egypt and the Levant, although Constantinople and its neighbourhood, it is notorious, have been grievously suffering for some weeks past. These are but samples of the quarantine measures which are being adopted against the spread of the cholera throughout the Mediterranean.

And now to pass to another distemper. The occurrence of the "cattle plague," which is at present exciting so much controversy as well as apprehension throughout the country, affords a good occasion for examining the general question as to the circumstances connected with the rise and spread of a dangerous epizootic;—in order to determine whether it can be fairly traced exclusively to importation *ab extra*; or whether it has become *intrinsically* developed under certain favouring conditions of atmosphere and locality; or, lastly, whether both these agencies have had to do with its origin. The greatest obstacle to be encountered in making out these points will be found in the difficulty of collecting a sufficient amount of thoroughly trustworthy and reliable simple facts, as to places, dates, &c., respecting the appearance of the malady in different countries and in different districts of a country, and without the data being coloured, modified, or in any degree distorted by the opinions, interests, or fear of the witnesses. All who have undertaken such inquiries well know that it is no easy thing to get at the whole truth without much sifting and cross-examination in the first instance, and a good deal of patience in collating and comparing the evidence afterwards.

The relations of quarantine to certain epidemic diseases, and to the duties of governments in respect of the public health arising therefrom, have lately been engaging considerable attention on the Continent. The elaborate and very able paper by Dr. Melier in the Memoirs of the French Academy of Medicine for 1863, describing all the facts connected with the recent importation of yellow fever into the port of St. Nazaire, at the mouth of the Loire, and the proceedings adopted to arrest its progress, has deservedly attracted much notice, and will doubtless be frequently appealed to in future. At the meeting of the Association Internationale pour le Progrès des Sciences Sociales, held last year in Amsterdam, one of the subjects set down for discussion in the Public Health Department was—"Peut-on abolir sans inconvénients les quarantaines; (*a*) en général; (*b*) dans les ports de l'Europe autres que ceux de la Méditerranée?" Dr. Milroy, who had been requested by the Association to take part in the discussion, communicated a paper on the subject, which was read at the meeting, and which now appears in the Annals or Transactions of the session, just published at Brussels. After giving a summary of the principal results of the comprehensive inquiry lately carried out in this country, and which was ordered to be published by the House of Commons, he strongly recommends "the appointment of a committee of members from different countries, to ascertain, from authentic sources, the working and the results of the existing system of quarantine in the chief commercial ports of the South of Europe, as Lisbon and Oporto, Cadiz and Port Mahon, Naples and Palermo, Trieste, Constantinople, and Alexandria, &c., during the last few years." He points out also the great advantage to science that would speedily ensue if every quarantine board were required to make a faithful annual report of their proceedings, and if these reports were published. Hitherto, these proceedings and their results have been all but unknown, so that the check of enlightened public opinion has never been brought to bear upon them. Until this is done, there seems to be but little chance of the many existing absurdities and errors of the system, as it is carried out in most of the Mediterranean states, being remedied.

In the discussion which followed on the reading of Dr. Milroy's paper, Dr. Guye, of Amsterdam, mentioned that the Dutch Government had, in the previous year, brought a bill into the Legislative Chambers for the entire abolition of all quarantine restrictions, and that the bill had been rejected; "our national character inclining us not to destroy before we know what it is intended to reconstruct." Dr. Guye recommended a great abridgement of the detention usually imposed, and the prompt discharge of the cargo under due precautions after the plan adopted by Dr. Melier at St. Nazaire; likewise, the establishment of an efficient sanitary police in all large seaports for the systematic inspection of vessels before their departure as well as upon their arrival, and also of the state of the harbour, docks, dwellings of the seamen, &c.

Correspondence.

"Audi alteram partem."

AFFECTIONS OF CRANIAL NERVES IN LOCOMOTOR ATAXY.

To the Editor of THE LANCET.

SIR,—Will you kindly allow me to make a few remarks in reference to Dr. Althaus's interesting observations on Amaurosis in Locomotor Ataxy which appeared in your number for June 17th, p. 662, and, if your space permits, on other points connected with paralysis of cranial nerves in this disease?

In speaking of amaurosis in the remarks appended to the case published in THE LANCET of June 10th, I did not use the term as synonymous with "weak sight" or "affections of vision," but limited it, as it is now-a-days generally limited, to blindness from disease of the optic nerves or their centres; and I gave the ophthalmoscopical appearances I had met with in cases of amaurosis in patients suffering under locomotor ataxy. In five out of six of these cases, the optic discs have been brilliantly white, well margined, and the vessels have been of good size. In the sixth case the appearances were similar, except that there was a white cloud over the entry of the vessels at the centre of the disc. Whereas, in amaurosis occurring in other diseases of the nervous system (I need scarcely remark that I exclude such cases as retinal apoplexy, choroiditis, &c.), the atrophy has been of the kind which follows optic neuritis. Moreover, these two are the only varieties of atrophy of the optic nerve that I know of in cases of disease of the nervous system. I say, that I know of, as of course a physician's experience in ophthalmology is necessarily limited. Both varieties are met with "uncomplicated" at ophthalmic hospitals; but I have not yet seen an uncomplicated case amongst my patients at the London Hospital, or at the Hospital for Paralysis and Epilepsy; on the contrary, so far as I have observed, each kind of atrophy has distinct clinical associations. Just as in locomotor ataxy I have seen the first form only, so in amaurosis with hemiplegia the disc has always presented the appearances of recent or past neuritis. But I by no means wish to conclude that both kinds of atrophy are not to be found in cases of locomotor ataxy because I have only found one kind in the few cases I have had under my care. Indeed, so so far as present argument is concerned, since Duchenne has recorded a case in which the amaurosis presented "quite the ordinary features of atrophy of the optic nerve as it occurs from other causes,"—and this must be that following neuritis, as this is beyond all question the most common kind of atrophy, in cases occurring in physicians' practice at least,—I for the present put my opinion on one side. I yield at once to his great experience; but I would urge quite as strongly as ever, that in each case the ophthalmoscopic appearances should be carefully noted. For, with great respect for Dr. Althaus's opinion, I still hold that the distinction really is a very practical one. If there are two kinds of atrophy—or, to put it more simply, two sorts of ophthalmoscopical appearances,—they ought, I submit, to be distinguished. I would allow that it may not be always easy to tell the optic atrophy which follows neuritis from the other forms of atrophy which we find in the amaurosis of ataxy. To those physicians who are interested in this distinction I would urge the importance of watching the changes in the optic discs, from the condition of acute neuritis, step by step, to that of white atrophy. But, most unfortunately, the optic discs are very often not looked at in this early stage, when the appearances are most striking. For this reason I believe the two kinds of atrophy are sometimes confounded. The treatment of amaurosis is very unsatisfactory; but will it not give order to our attempts to treat it (and the attempt is constantly made), to distinguish its varieties wherever we meet with it? This is, of course, done by ophthalmic surgeons; but would it not be well that it should be done by physicians too? As a rule, the ophthalmic surgeon sees amaurosis chiefly as a local disease; the physician sees it as a symptom in a series, and therefore in wider relation. When a patient has ataxy as well as amaurosis, we may probably infer that the treatment is all the more hopeless. But it will even then be of value to study the ophthalmoscopical changes in the optic discs, as a help to complete the history of the disease in which it occurs. When, however, Dr. Althaus says the distinction is of little practical importance, he perhaps means in reference to treatment only—that, as a matter of fact, next to nothing can be done for the amaurosis. I must say that, in all my cases, there has been no improvement whatever in sight. Were I to find the ordinary form of amaurosis—neuritis,—my prognosis would be more favourable, as after the acute stage of neuritis there is generally a gradual, although a very slow, improvement in sight.

Then, of course, other defects of sight in ataxy ought to receive equal attention, and should be carefully distinguished one from another. I have at present under my care a patient who has dilatation of the right pupil and paralysis of the right ciliary muscle. The defect of vision in this case would at one time have been called amaurosis, but as the fundus oculi is quite normal, and as there is merely a loss of accommodation, it would not now-a-days receive that name.

Again, a patient under my care in the London Hospital has defect of sight now and then, but when it comes on he can read easily by aid of convex glasses. It is simply a failure of accommodation—a temporary presbyopia.

Another patient has paralysis of the right external rectus, but, except for double vision at the onset, the sight of each eye is good.

All these are defects of sight, but they are not amaurosis. Sometimes a patient has both amaurosis and paralysis of one or more of the motor nerves of the eyeball. I have now under observation a patient who has paralysis of both third nerves and both sixth nerves, and atrophy of each optic disc. This is a very severe case, one of the patient's arms being much affected. Another patient, a sailor, has paralysis of both third nerves and double amaurosis. The above five cases are well-marked cases of locomotor ataxy.

But paralysis of these nerves ought to be considered more widely. A few months ago I met in the street a man who had been under my care when, several years ago, I was clinical assistant at Moorfields. He had then paralysis of the right third nerve only. This he still has, but unfortunately he has now also severe pains in his legs, like those described by other ataxic patients, and occasionally a slight stumbling. I fear this patient, although he usually walks well now, will suffer from more marked symptoms of Duchenne's disease. I mention his case, as well as that of the sailor, to suggest the great importance of following up cases after the patients have ceased to attend ophthalmic hospitals, at which, and not at a general hospital, patients with paralysis of the motor nerves of the eye seek advice. It is absolutely necessary to do this, in order that the ophthalmic surgeon may know what "uncomplicated" paralysis of the third or sixth nerve means. To me this used to be, and to a great extent still is, a great difficulty. A patient would come to Moorfields for paralysis of the sixth or third nerve. He got rid of it, or he ceased to attend. Frequently the patient seems to be in excellent general health. I wondered what became of these patients. Three cases only have I been able to trace. Two of them I have mentioned. The third is the case of an old man who was under care for paralysis of one motor oculi nerve for several months. He got well, and although past seventy he has kept well three years. At the Hospital for Epilepsy and Paralysis, and at the London Hospital, I have never been consulted for uncomplicated paralysis of any of the motor nerves of the eye. I have found paralysis of these nerves with hemiplegia and with locomotor ataxy, but never alone. Thus, as is the case with amaurosis, ophthalmic surgeons and physicians see affections of orbital nerves under different circumstances. Physicians and surgeons might, I submit, study such cases jointly with mutual advantage both as regards diagnosis, prognosis, and treatment.

Then as to amaurosis being a common symptom in ataxy. I have found it six times in about twenty cases. This proportion seems to bear out Dr. Althaus's opinion, that it is common. Really, however, these cases are of little value as statistics, but the attempt to use them as such may be of value as showing one source of danger in the use of statistics. Several of the patients with defects of sight were sent to me because I was known to be interested in eye symptoms in cases of disease of the nervous system. For instance, the sailor, whose case I have just mentioned, was sent to me from Moorfields four years ago by Mr. Couper, because the man had had a "fit." He had also paralysis of each third nerve. A few weeks ago I heard that he was "lame," and I therefore sought him out. I found that he still had paralysis of each third nerve, and, moreover, double amaurosis, and, besides, loss of power of co-ordinating the movement of his legs.

I am kindly permitted to mention the experience of my colleagues at the Hospital for Epilepsy and Paralysis on this matter. Dr. Radcliffe tells me that he has seen but two cases of locomotor ataxy in which sight has been much impaired. Moreover, he says that he is under the impression that eye-symptoms generally are much less frequently met with in cases of locomotor ataxy in this country than in France. Dr. Ramskill has seen amaurosis in locomotor ataxy twice only. Dr. Sieveking tells me that he does not remember to have seen this complication. Dr. Bazire has given me an account of the ocular defects of ten cases of which he has himself taken careful notes. In not one was there any mention of amaurosis, and in but two was there decided amblyopia.

Of course it is not easy to fix the proportion of cases of amaurosis which should justify us in saying that amaurosis is a common or uncommon symptom in ataxy. In Dr. Althaus's experience—two or three in five—the proportion is certainly a large one, and Topinard's remark, which he quotes, bears him out in his opinion.

The frequency with which affections of those of the cranial nerves which go to the eyeball are met with in comparison with affections of the other cranial nerves is very significant in a disease of which the essential feature is disorder of locomotion. Sometimes, however, other nerves of special sense besides the optic are affected. In two cases I have found nearly complete deafness. In one of these the patient was amaurotic as well. In the other, also, the patient was partially blind, but in this instance it was from organic disease of the deeper parts of the eyes. And here I cannot but express my regret that it is so difficult to ascertain with precision the cause of deafness in diseases of the nervous system—e. g., as to whether it depends on a defect of the auditory nerve, or its centre, or on disease of the aural apparatus. In but one case have I met with loss of smell, and this was in the patient who had paralysis of the right ciliary muscle. I have not yet seen paralysis of the fifth, portio dura of the seventh, eighth, (here I mean so far as one can judge by paralysis of the palate and vocal cords,) or of the ninth nerves. But excepting paralysis of the portio dura, we rarely see paralysis of these nerves under any circumstances.

All these points have been well worked out by Duchenne and others, and it is a vast help to have the benefit of their experience. But now that the disease is attracting considerable attention in England, it may be well to judge it by the separate experience of English physicians. This, so far from detracting from Duchenne's merits, will, I believe, tend to establish his views on a surer foundation.

I have the honour to be, Sir, &c.,

J. HUGHLINGS JACKSON, M.D.

Bedford-place, Russell-square, Aug. 1865.

THE THERAPEUTICS OF ACUTE RHEUMATISM.

To the Editor of THE LANCET.

SIR,—With your permission I would like to add one practical remark to my note published in THE LANCET of last week on the treatment of acute rheumatism.

I find that good acetum lyttæ—such as can be fully depended upon—well painted into the skin, in zones round the affected joints, and close to the inflamed parts, produces much less pain than the usual mode of blistering by strips or circular bands of empl. lyttæ. The pain due to the constriction and tension of the strips over the rising surfaces is avoided, and the vesication obtained with but little inconvenience to the patient. The acetum lyttæ must, however, be good; many preparations of it are sold which are utterly worthless. I usually order the skin to be well sponged with warm water, and three successive applications of the acetum lyttæ to be made sufficiently quickly after each other to allow of the certain absorption of the fluid by the surface.

I am, Sir, yours obediently,

Finsbury-square, Aug. 21st, 1865. HERBERT DAVIES, M.D.

NEWCASTLE-ON-TYNE.

(FROM OUR OWN CORRESPONDENT.)

THE Report of the Newcastle Infirmary for the past year has just been issued. There have been admitted 1657 in-patients and 2448 out-patients, with 12,101 casual cases. While there has been a large increase in every class of patients, it is satisfactory to know that the resources of the charity have been fully equal to the demand; the amount of subscriptions has been considerably in excess of that received in former years, while the benefactions and legacies amount to a large sum. From the house-surgeon's comprehensive tables, it appears that the large number of 2206 accidents have been treated within the year; while the operation list indicates a very large amount of surgical practice. The average mortality of in-patients has been 6·82 per cent. The cost of each in-patient was £2 10*s.* 3*d.*; that of out-patients and casual combined, 7*d.* each. Within the memory of the present generation this fine institution stood at a considerable distance from the town, but it has long since been encroached upon and surrounded. To the west particularly, which was taken up with farms and green fields, there is now a busy population of more than thirty thousand; while the largest, and in consequence the noisiest, cattle-market in the North is held around its walls, beneath which also runs the Carlisle section of the North-Eastern Railway, with its great and increasing traffic. It does not require the gift of prophecy to see that before many years the Newcastle Infirmary must stand in a different situation from its present one. I may mention that acupressure has been tried lately in the infirmary (for the first time), by Dr. Heath, in a rectangular amputation of the leg; and this mode of securing the tibial vessels appears to have given satisfaction.

Our municipal authorities are showing a commendable amount of activity—in cleansing the town, and in encouraging the poorer inhabitants to attend to sanitary matters. The corporation has offered lime gratis for whitewashing purposes &c. to all who choose to apply for it; while several successful raids have been made upon sausage-makers and other vendors of unwholesome food. All these efforts tend towards the sanitary reform which we hope to see here, and of which we stand very much in need. The health of this town, and of the sister borough of Gateshead, has been upon the whole good during the summer. There has been a remarkable absence of fever, and the outbreak of small-pox appears to have subsided; 700 have been successfully vaccinated during the last quarter in Newcastle. The number of births in the same period was 1288.

During the last few weeks diarrhœa has been rather prevalent in Newcastle and Gateshead; but I do not think, considering the season, that the affection has been greater in amount or severity than usual. A few cases presenting choleraic symptoms will always occur at this time. At Sunderland, however, the returns of the registrars show that the deaths in the fortnight ending last Wednesday week were 116, against 93 in the corresponding fortnight last year; and this increase has been entirely from diarrhœa, and chiefly amongst children under twelve months; there having been 40 deaths of infants under that age, and 22 above one year and under five. In the six weeks ending June 28th the total number of deaths was 6 from diarrhœa, while in the same time from that date to August 9th they had increased to 51.

At the present moment, when everything that concerns ocean telegraphy is interesting to all classes, it may not be out of place here to mention that at the time of the first failure to lay the cable by the present Atlantic route, our townsman, Dr. D. B. White, was the first who suggested the northern way (or that from the north of Scotland to the Faroe Islands, Iceland, Greenland, and on to Labrador), now well known as Col. Schafner's route. It is the opinion of many that this route, although more irregular, offers most chances of success. Should this eventually be the case, I hope Dr. White will be more fortunate in receiving credit for the suggestion than was our late townsman, Mr. Garnett, the chemist, who was really the inventor, in 1797, of the semaphore, although in 1815 Sir Home Popham received the credit of it.

Newcastle-on-Tyne, August 22nd, 1865.

CHRONIC FARCY IN MAN.—A case is published in a French journal of a blacksmith who used to sleep in the stables. One of the horses was taken ill and died, without any symptoms of glanders, but affected with an extremely fœtid diarrhœa. Soon afterwards the man sickened and died exhausted in hospital with a great number of tumours which had formed in different parts of the body. One of these suppurated, and the pus was inoculated in various ways on an old horse and a donkey. Both died a few days after—the first with signs of chronic farcy, the second with those of acute glanders. The three autopsies revealed extensive deposits of softish and small tumours in the lungs.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations, were admitted Licentiates in Midwifery at a meeting of the Board on the 16th inst.:—

Antonini, Charles, King's College Hospital; diploma of membership dated May 20, 1862.
Dod, Harry Davenport, Great Coram-st., Russell-sq.; April 26, 1865.
Hoffmeister, William, Cowes, Isle of Wight; July 25, 1865.
Leake, Jonas Richard, Wingfield, Upper Norwood.
Marsh, John, New Wandsworth, Surrey; November 15, 1860.
Ray, William, West-square, Southwark; November 18, 1864.
Tibbits, Herbert, St. Bartholomew's Hospital.
Tindall, Alex. M'Ivor, St. Bartholomew's Hospital; April 25, 1865.
Woodman, William Bathurst, London Hospital; April 12, 1861.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine and received certificates to practise on the 17th inst:—

Fairland, Edwin James, Guy's Hospital.
Gittins, John, Shrewsbury.
Heaven, Charles Thomas, Thistle-grove, Brompton.
Hilder, Nelson Albert, New-terrace, Camberwell-park.
Hughes, John Pearson, Llandovery, South Wales.
Lundy, Louis Francis, Feltham, Middlesex.
Madeley, George Henry, Holland-road, Kensington.
Smith, Charles James Hardy, Upper Craven-place, Kentish-town.
Weekes, Henry, Brompton, Kent.

The following gentleman also on the same day passed his first examination:—

Yeomanson, John, St. Bartholomew's Hospital.

ON THE DIVISION AND REUNION OF NERVES.—Two eminent surgeons of Paris, M. Nélaton and M. Laugier, have published cases in which the accidentally divided median nerve had been brought together by suture. Perfect reunion had occurred, and the functions of the nerve became re-established. These results induced two German pathologists, Messrs. Eulenberg and Landois, of Greifswald, to institute a series of experiments on rabbits and dogs in order to ascertain the fact; and it would appear that, in spite of accurate apposition and every care taken, neither union nor the re-establishment of the functions of the nerves could be obtained.

FORFARSHIRE MEDICAL ASSOCIATION.—The seventh annual meeting was held in the White Hart Hotel, Arbroath, on Thursday, the 13th ult. It was agreed to hold the next annual meeting in Montrose, and that the following be the office-bearers for the ensuing year:—President: George Steele, M.D. Vice-Presidents: David Johnston, M.D., and Matthew Nimmo, Esq. Secretary: J. R. Begg, Esq. Treasurer: Geo. C. Pirie, M.D. Council: Drs. Gibson, James Arrott, Christie, Crockatt, J. A. Cowper, and J. W. Miller. Local Secretaries: J. A. Dewar, M.D., S. Lawrence, M.D., J. Guthrie, M.D., and G. P. Alexander, Esq.

ENTOZOA IN THE CALF.—The recently-issued part (No. 75) of the "Proceedings of the Royal Society" contains a paper by Dr. Cobbold and Prof. Simonds, "On the production of the so-called 'acute cestode tuberculosis' by the administration of the proglottides of Tænia mediocanellata." The symptoms of the disease, which nearly caused the death of the calf, are fully detailed, and in the description of the post-mortem examination all the muscles are named in which the parasites appeared. The authors conclude their paper as follows:—"From the number of young vesicles present in the minute portion of muscle removed by operation from the living animal, we had (in the pages of THE LANCET) publicly announced our belief that we might ultimately find 30,000 cysticerci developed in this calf; but as the larvæ were subsequently found to be almost entirely confined to the superficial muscular layers, it turned out that our calculation was considerably beyond the mark. Nevertheless, from post-mortem data, we estimate that there were between seven and eight thousand 'measles' present, and one of us counted 130 vesicles at the surface of a single muscle." The authors express their indebtedness to Dr. Greenhow, Dr. Anderson, and Mr. Brookhouse (Nottingham), for the specimens of tape-worm employed in this interesting experiment.

MEDICAL APPOINTMENTS.

E. BATT, M.D., has been appointed Medical Attendant, by the Commissioners in Lunacy, of the Retreat Asylum, Clapham, John Bush, Esq., Proprietor.

Mr. W. CURTIS has been elected Dispenser to the Royal Portsmouth Hospital, vice Mr. Taylor, resigned.

S. GILES, M.D., has been elected one of the Surgeons for the Deptford District, Royal Kent Dispensary.

J. HENDERSON, L.F.P. & S. Glas., has been elected one of the Surgeons for the Deptford District, Royal Kent Dispensary.

J. S. HORTON, M.R.C.S.E., has been elected Medical Officer and Public Vaccinator for District No. 6 of the Blything Union, Suffolk, vice O. W. Hoffman, M.R.C.S.E., resigned.

J. I. MACKENZIE, M.B., has been elected one of the Medical Officers of the Sidmouth Dispensary.

J. F. BYDER, M.R.C.S.E., has been elected one of the Surgeons for the Greenwich District, Royal Kent Dispensary.

F. STEELL, M.D., has been elected Resident Surgical Officer to the General Hospital, Birmingham, vice G. Ferguson, M.B., resigned.

H. W. S. STURTON, M.R.C.S.E., has been elected Resident Medical Officer to the Royal Kent Dispensary.

Mr. T. STURTON has been elected Dispenser to the Royal Kent Dispensary.

MILITARY AND NAVAL MEDICAL APPOINTMENTS.

R. ADAMS, M.D., Assist.-Surg. from the 81st Foot, has been appointed Staff Assist.-Surg. Army, vice Grosse, appointed to the 109th Foot.

S. ARGENT, M.R.C.S.E., Staff Assist.-Surgeon Army, has been permitted to resign his Commission.

F. H. BAXTER, M.D., Surgeon 12th Lancers, having completed twenty years' full-pay service, has been promoted to Surg.-Major under the provisions of the Royal Warrant of the 1st of October, 1858.

E. A. BIRCH, L.R.C.S.I., Acting Assist.-Surgeon R.N., has been appointed to the "Donegal."

W. BROWNE, M.R.C.S.E., has been appointed Assist.-Surg. to the 2nd Administrative Batt. of Staffordshire Rifle Volunteers.

W. B. FLETCHER, M.R.C.S.E., Assist.-Surg. R.N., has been appointed to the "Research."

D. C. GROSSE, Staff Assist.-Surg. Army, has been appointed Assist.-Surg. to the 109th Foot, vice Carter, deceased.

G. HALDWELL, Senior Apothecary Madras Medical Establishment, has been promoted to the local and honorary rank of Assist.-Surgeon.

J. HINTON, M.R.C.S.E., Assist.-Surgeon from the 10th Hussars, has been appointed Staff Assist.-Surgeon Army, vice Milburne, appointed to the 10th Hussars.

W. L. M'DERMOTT, Assist.-Surg. R.N., has been appointed to the "Victory" for Haslar Hospital.

A. M'DONALD, M.D., Assist.-Surg. R.N., has been appointed to the "Linnet."

R. J. M'MORRIS, M.R.C.S.E., Assist.-Surg. R.N., has been appointed to the "Himalaya."

W. E. MASDEN, M.B., has been appointed Assist.-Surg. to the 2nd Administrative Batt. of Staffordshire Rifle Volunteers.

J. T. MILBURNE, M.R.C.S.E., Staff Assist.-Surgeon Army, has been appointed Assist.-Surg. to the 10th Hussars, vice Hinton, appointed to the Staff.

Births, Marriages, and Deaths.

BIRTHS.

On the 30th of April, at Adelaide, South Australia, the wife of Dr. Bayer, of a son.
On the 14th of June, at Colaba, Bombay, the wife of J. Y. Smith, M.D., Indian Service, of a son.
On the 3rd inst., at Barehill, Brechin, the wife of J. Pringle, M.D., Madras Army, of a son.
On the 15th inst., at Cottishall, Norfolk, the wife of Hugh Taylor, of a son.
On the 15th inst., the wife of Pierce Mansfield, M.D., R.N. Hospital, Plymouth, of a son.
On the 18th inst., at York-street, Cheetham-hill, Manchester, the wife of R. C. Smart, M.D., of a daughter.
On the 19th inst., at Belgrave Villa, Hope-terrace, Edinburgh, the wife of Dr. G. R. Barnes, of a son.
On the 19th inst., at Harcourt-street, Dublin, the wife of H. G. Croly, F.R.C.S.I., of a son, still-born.
On the 19th inst., at Templemore, the wife of T. E. White, M.D., Surgeon 65th Regt., of a daughter.
On the 21st inst., at Godalming, Surrey, the wife of Wm. Parson, Surgeon, of a daughter.
On the 23rd inst., at Duncan-terrace, N., the wife of A. Ernest Sansom, M.B., of a daughter.
On the 24th inst., at Pine House, Camberwell-green, the wife of John Swan Flower, Esq., of a son.
At Clarence-terrace, Leamington, the wife of T. A. Carter, M.D., of a son.

MARRIAGES.

On the 2nd inst., at Southampton, Mordey Douglas, M.R.C.S.E., youngest son of Martin Douglas, Esq., of Sunderland, to Emma, youngest daughter of the late Sampson Payne, Esq., of Freemantle, and Bevois Mount, Hants.—No Cards.
On the 14th inst., at St. Mary's, Haverfordwest, Pembrokeshire, J. R. Morgan Evans, Esq., Surgeon to the Pembrokeshire and Haverfordwest Infirmary, to Sarah Anne, only surviving daughter of the late Rev. Thos. Watts, Rector of Herbrandstone, Pembrokeshire, and Prebendary of St. David's.
On the 21st inst., at Peterborough, H. W. S. Sturton, M.R.C.S.E., to Anne, daughter of J. Sturton, Esq.
On the 21st inst., at Redruth, D. M. Williams, M.R.C.S., of Olney, Bucks, to Maria Josepha, eldest daughter of the late Wm. Reynolds, Esq., of Redruth.—No Cards.
On the 23rd inst., at St. George's Church, Ramsgate, Edmund Bower, M.D., of Windsor, to Amelia Thomasina, second daughter of Captain Henry Wilson, late of the 13th Hussars.—No Cards.

DEATHS.

On the 15th inst., Thos. E. Davies, M.R.C.S.E., of Repton, near Burton-on Trent, aged 32.
On the 20th inst., Wm. Watson, M.D., of Leslie, Fifeshire, aged 29.

To Correspondents.

A. B. C.—In our opinion morphia is by no means so sure an hypnotic as is opium. But as a mere calmant, it is more manageable, and does not leave behind it those results which too often follow the employment of opium. Morphia has, however, often a very sedative effect on the heart's action, so that it should be given with great caution in marked doses in the latter stages of such a complaint as phthisis for example. The patient may be lulled to sleep, but—he may not wake again.

Medico (Bristol) will find the information he desires in The Lancet of January 7th, 1865, p. 18.

C. K., (Eastern Counties.)—We have carefully perused the "statement." Before giving our opinion, we should be glad to know whether the surgeon whose conduct is the subject of complaint had left a competent representative to officiate during his absence.

M.D.—Dr. Granville on the Spas of England.

Mr. G. Tidy.—From thirty to sixty minims in a cup of milk on an empty stomach; but the remedy should not be given except under medical superintendence, as a certain preparation is necessary to ensure success.

A. Z. A. is certainly entitled to use the letters as he desires.

M. B.—It is stated that the person in question has never before been in this country.

Mr. Merritt's letter "On Military Hygiene" shall appear in the next Lancet.

The Medical Directories.

To the Editor of The Lancet.

Sir,—As your correspondent on the above subject, "J. M. A.," appears to class himself with intelligent men in and out of the profession, I cannot help remarking that he has shown a singular want of intelligence and fairness in his letter. He has evidently been wasting his "thorough disgust" on very undeserving objects. In a recent circular the Editors of the Medical Directories invite, as usual, particulars as to "name, address, scientific societies, published works, papers, &c. &c., from every member of the profession, the whole to form a brief biographical and bibliographical record, which can be found *only* (italics by Editors) in the Medical Directories." Now, when "J. M. A." says, "You can scarcely look at a page but you will find Dr. So-and-so is the author of such-and-such. What is the meaning of all this? Let the Editors sweep it all away?"—he must surely be under some misapprehension as to the scope and objects of the work. It appears to me that the most distinctive and useful feature of the Medical Directories is its "biographical and bibliographical record." The returns, it must be remembered, verified by dates, are made on the direct solicitation of the Editors; and who can doubt, drawn out as they are in many instances to a considerable length by the very best men in the profession, that they are, as a whole, marked by candour and truthfulness. No doubt errors and exaggerations, from the very nature of the work, are apt to creep in; but these the Editors are always glad to be informed of, and to correct. The little attempts here and there to make the most of one's self, I have looked upon as a pardonable over-anxiety to stand well with the profession, rather than as a roundabout way to attract the attention of the public. To try to catch the public eye, as hinted at by "J. M. A.," by means of a work published entirely for the members of the profession, is a mode of gaining notoriety that I imagine few expect to profit by. Speaking for myself, instead of having the "bibliographical record," with all its defects, swept away, I would rather see it extended, and made more complete. I am one of those who believe that it might be made quite a useful institution. It is not only interesting to see what has been written by one's friends and others, but it is a great advantage in getting up cases and papers for publication to know where to look for records of similar cases. In affording this kind of information, the Medical Directories are most useful and unique; and if the Editors do not make a mistake by too much curtailing, they will become in this respect more and more useful. There is an immense amount of medical intellect and valuable experience running to waste for want of a proper cultivation of the habit of recording cases. Let those, then, who take the trouble to record their cases and experience, and obtain the distinction of appearing in The Lancet or elsewhere, enjoy the credit due to their industrious efforts by having them duly noticed in the "bibliographical record." Instead of calling forth ill-natured and envious growls, like that just emanated from your correspondent, I believe the general effect will be to stimulate emulation in a useful direction, and thus do lasting service to the profession.

I may observe, in conclusion, that if the Medical Directories were to be confined to school and university prospectuses, a mere copy of the Medical Register, and miscellaneous information that can easily be obtained elsewhere, I do not see that we want it at all. Fortunately the publishers' views in the matter must be chiefly commercial; to make the work pay, it must be made to please everybody. "J. M. A." will probably get ample opportunities for indulging in the refreshing mental exercise of studying the school prospectuses (I do not see why the Students' Number of The Lancet would not do as well); and if this letter should come under the observation of the Editors, some consideration might possibly be given to the views of,

Your obedient servant,

Vindex.

August, 1865.

To the Editor of The Lancet.

Sir,—I trust the Editors of the Medical Directories will not be induced by the letter of your correspondent, "J. M. A.," to attempt to reduce the size of the volume by omitting or curtailing the references to the published works of authors. Such references are an immense convenience to those engaged in the literature of the profession, and often save an infinity of time and trouble by enabling them to ascertain at once the name and date of the journal in which a paper by any given author may be met with. I am constantly in the habit of referring to the Directories for this purpose, and I know of no other source from which I could obtain the same information. I have no doubt that a large number of the subscribers to the Directories would join me in the desire that references of this kind should be extended rather than curtailed. How they can be regarded in the light of "advertisements for the eye of the public," I am at a loss to understand.

I am, Sir, your obedient servant,

Literatus.

August 21st, 1865.

H. C.—1. A very good book on the diseases mentioned is that of Langston Parker, of Birmingham. Bumstead, of New York, has also very recently published a second edition, which contains the most recent facts and theories. This latter work is extremely valuable, and may be obtained of Trübner, Paternoster-row, London. Durkee's treatise is also American, and a very good one (same bookseller). — 2. Charrière's address is, Rue de l'Ecole de Médecine, Paris.

Mr. A. F. Newland.—We do not prescribe in this place. Any respectable surgeon would be able to give the advice desired.

A Reader of The Lancet (Pembroke Dock) should inquire of the Secretary of the Association, 1, Adam-street, Adelphi.

The communication of *Mr. H. B. Hodges* shall receive attention next week.

How Medical Men are treated in Jamaica—Remarks on Vaccination.

To the Editor of The Lancet.

Sir,—I happened to-day to observe in your number of July 22nd a letter from "A Country Practitioner" in Jamaica, complaining of the smallness of his remuneration for vaccination in one of its twenty-two parishes. I had a good deal to do in the same way in the island thirteen years ago, and was allowed £160, which is twice as much as he received, and I had about six months' pretty constant work for it; but then I had 7000 cases, instead of the 2000 he speaks of. With the exception of revaccinations, they were mostly very successful, and I always expected partial success with the latter. I would have vaccinated even more, but that, on account of the carelessness and perversity of the people generally, I had constant difficulty in keeping up a supply of good lymph. Indeed at one time I could get none, and had to inoculate as many as 700 to save human life. Out of these I only heard of three deaths, and on making inquiries found that the infection of small-pox had evidently been received before I touched the patients; one, if not more, had already fevered. When inoculating I only made one small puncture or scratch. I would suppose that as one puncture for vaccination produces much less febrile disturbance than two, three, or four, so the same should hold good with inoculation with the small-pox lymph. I got no pay for my inoculations; indeed I began with much hesitation, not knowing what law there might be prohibiting the practice. By the time I had finished my experiment, a proclamation was issued by the Executive Council, forbidding it. I forget what the penalty was to be, or whether it was made out to be felony, or merely a fine, as in Great Britain.

Your correspondent had to ride thirty miles daily to perform his work. This is certainly excessive labour if continuous. I have myself had to stay twelve days from home at a time to economise the strength of my horse or mule; but I would get over forty miles on a Monday morning, after swallowing a crust of bread and a cup of coffee before starting about four o'clock, and I was able to commence operations by noon or so.

There is something said in the letter about starving in Jamaica; but I would say that no one need fear that who can travel thirty miles daily, or even twenty, and attend conscientiously to a widely-scattered practice at the same time.

It appears strange that your correspondent was only successful with over 1000 in 2000 cases. There must surely be some mistake. I vaccinate about sixty monthly now, and do not fail in over two cases out of that number. Indeed I think if I were sufficiently careful I would always succeed. I preserve the lymph in fine capillary tubes, as fine as can be well handled without breaking. When required for use, after snipping off the ends of the tube, I blow the lymph on to near the point of the lancet, place the lymph on two spots of the child's arm half or three-quarters of an inch distant from one another, then give fifteen or eighteen light scratches with the lancet till the lymph is coloured with blood. A child never feels much pain in this way, and need never be made to cry. These particulars are worth attending to, especially when there is a necessity of immediate vaccination from the proximity of small-pox and consequent risk of infection.

I am at a loss to know why the Compulsory Vaccination Act for England provides that children should be operated on before three calendar months have elapsed, while in Scotland and Ireland six months are allowed. I find in practice here the majority of children are not brought for vaccination till after they have completed five months, and very often it is two or three weeks later. I saw a fatal case of small-pox lately in a child four months old. I think the risk of papular eruptions after vaccination must be increased when the operation is long delayed. I have vaccinated a few hours after the birth of a child when there was small-pox in the same cottage. Everything went on well after, and the child escaped infection.

I remain, Sir, yours, &c.,

Glasgow, August 16th, 1865. An Old Jamaica Practitioner.

Scrutator calls our attention to a set of splints for fractures or diseased limbs, which are now to be seen in the museum at South Kensington. They are the invention of Mr. Parker, of Bath, and our correspondent thinks highly of them.

Lac.—A solution of atropia, or the extract of belladonna.

A Sufferer.—The treatment of the disease in question is always prolonged, the affection being deeply constitutional, as well as having very obstinate local manifestations.

S. R. C.—1. We are not acquainted with any such instance.—2. The advertising columns of The Lancet will afford the information.

Mr. W. C. Matthews.—The copy of the letter sent is an advertisement.

Sea-Air in Phthisis.

To the Editor of The Lancet.

Sir,—In your last week's number there is a letter from Mr. Douglas, strongly recommending sea-water spray in affections of the lungs.

Now, Sir, is it a settled point in therapeutics that such treatment is really beneficial? for I recollect attending Dr. Corrigan's lectures on the Practice of Medicine nearly thirty years ago, when he strongly condemned the practice of sending consumptive patients to the sea-side, for this reason, that the salty particles floating in the air irritated the lungs, and consequently were very injurious. He recommended an inland situation, with heat and moisture combined. As Dr. Corrigan is no mean authority on any medical subject, it would be satisfactory to know his present opinion, and I have no doubt your valuable journal will afford him the opportunity of so doing.

I am, Sir, your obedient servant,

An Anglo-Celt.

August 22nd, 1865.

Mr. J. Massey, (Nottingham.)—Our attention has already been called to the most objectionable advertisement which appears in the *Sheffield Daily Telegraph*. The difficulty of dealing with this kind of advertisers is much greater than our correspondent appears to think. The Medical Act is so deficient in its protective clauses that to obtain a conviction is almost impossible. We must look to the Legislature for a remedy, and the progress of events seems to show that it cannot be long withheld.

Mr. W. Lowry.—In our next impression.

A Young Student had better read the lives of Brodie and Hope, or the volume of "Lives of British Physicians" contained in the well-known "Family Library."

Mr. Frederick Churchill.—No such communication has reached our Office.

EFFECTS OF IODIDE OF POTASSIUM.

To the Editor of THE LANCET.

SIR,—A lively discussion on this subject has been going on in your pages for some time back, and as my name happens to have been introduced, I shall, with your permission, trouble you with a sentence or two.

At the outset I would remark that the writers could hardly in the whole range of the Pharmacopœia have fixed on a drug of more importance, whether we regard its undoubted therapeutic value, or the wide and ever-increasing employment of it alike by the physician and the surgeon. In this part of the kingdom I believe nearly fifty per cent. of the prescriptions contain it, and, as I have observed in my "Manual of Materia Medica," it is "the common resort of the practitioner in disorders mild and grave, doubtful and obscure, and where other drugs have failed." Now it would be a serious reflection on the observant faculties of the profession were it to be alleged that signal and beneficial results were not the warrant for the vast and unparalleled confidence in this drug disclosed by such wide prescription of it; yet it must be admitted that its precise and definite function or capability is still unknown, and in this respect it is much less satisfactory than some other drugs, such as quinia and colchicum. You often gladly confide in it for getting rid of a serous effusion, packing off a rebellious skin disease, or mitigating the obdurate and recurring manifestations of secondary syphilis; but it is, withal, an erratic drug, for at other times you will find it singularly inactive, or playing such queer and fantastic tricks as make the physician wonder. If this be the character of the drug—and great lights aver so,—there may be hope for Dr. Atkinson's view, and it is certainly an argument for more forbearance and generosity than were shown by the acute but somewhat caustic Dr. Black. I would not be held, however (if it is any satisfaction to the latter gentleman to hear it), as endorsing the opinion that erysipelas could be produced by it. This is a disease due to a specific poison or virus unknown, and certainly not capable of being generated by so familiar a drug as the one in question, or, if so, it would have been settled and obtained the *status* of a fact long ago. Still by its depressing action, by lowering vitality, by hastening the consumption of tissue, or interfering with nutrition, it may induce a more favourable soil for the implantation of the virus, when the miasmatic influence is hovering about, and I think I have seen something of this kind. I believe Dr. Atkinson is correct in saying that erysipelas is aggravated by it, and probably by witnessing this fact, and not from a luxuriant fancy, he had been led to credit the iodide with what is still a dark mystery, obscurely lighted up by the dim rays of speculation. I remain, Sir, yours, &c.,

Edinburgh, August 8th, 1865. ALEXANDER MILNE.

To the Editor of THE LANCET.

SIR,—The "effects of iodide of potassium" must have become by this time so tiresome a subject to many of your readers that it is with reluctance that I venture to intrude again upon your space.

Dr. Atkinson states in his last communication that I appear to entertain exactly the same idea that he does upon the point at issue—viz., that in the cases he quotes the condition of the atmosphere was the predisposing, and the iodide the exciting, cause of erysipelas. I can only say that Dr. Atkinson appears to have mistaken my view of the case. As I before stated, I believe the exciting causes to have been the vitiated air of the hospital and the general character of the atmosphere in the neighbourhood, the iodide of potassium merely rendering the patient more susceptible to their combined influence by virtue of its depressing effect upon the system.

It is hardly necessary to add that, considering all the circumstances of the case, I agree with Dr. Black in his opinion that the only verdict which Dr. Atkinson's hypothesis admits of is that of "not proven."

I am, Sir, yours obediently,

Blackfriars, August 14th, 1865. H. GORDON SHEA, M.D.

Vincit Omnia Veritas.—1. Wm. Spottiswoode, Esq., M.A., F.R.S., Treasurer, 19, Chester-street, Belgrave-square, S.W.—2. Yes, if it be deemed worthy.—3. At Birmingham in September.

SUBSCRIPTIONS FOR MRS. THOMAS.

THE following additional sums have been received:—

A. B.	£5	0	0
Dr. Godfray	1	0	0
Dr. Townley	1	1	0
Collected by Dr. Cassells, Anderston, near Glasgow	2	14	0
F. P. Weaver, Esq., per Coutts and Co.	0	10	6
Mrs. Cawley ... ... ditto	0	5	0

An Assistant-Surgeon.—Several assistant-surgeons do live, and probably comfortably, on their pay simply; but strict economy must undoubtedly be exercised.

Dr. De Liele Allen's communication shall receive attention in our next.

A GOOD SUGGESTION.

To the Editor of THE LANCET.

SIR,—In your impression of this day I observe that a Milk Company is about to commence operations on a large scale. May I ask whether the "erection of suitable buildings" could not take place more advantageously in the country than in town? In other words, whether it would not be more easy to bring the milk to London than to bring the fodder (so much more bulky) to the cattle? In short, whether, apart from sanitary considerations, mercantile motives might not induce the Company to get up fresh milk from the country? Your obedient servant,

Helston August 10th, 1865. J. W.

Italia.—The paper in question is entitled "On the Transformation of the Blood into Fatty Matter," by Doctor Cav. A. Tigri, Professor of Anatomy in the University of Sienna. It was read before the Academy of Medicine at Turin last spring.

Canada.—1. No.—2. Few or almost none. The appointment of physicians to gaols and the Provincial Lunatic Asylum and Penitentiary is in the hands of Government.

Mr. F. White.—There is much force in the observations of our correspondent, and they in the main accord with those enunciated in the pages of this journal.

Dr. W. S. Miller will oblige by re-stating the case. The manuscript to which he refers has unfortunately been mislaid.

Inquirens.—1. It varies in proportion to the number of emigrants, &c.—2. To the Commissioners of Emigration, Park-street, Westminster.

INFANTS' FEEDING-BOTTLES.

To the Editor of THE LANCET.

SIR,—Can you or any of your readers inform me where infants' feeding-bottles may be obtained which are made the shape of the breast, and can be slung by a strap over the shoulder, so that the child may take its food in the natural position? Yours truly,

August, 1865. P. M.

COMMUNICATIONS, LETTERS, &c., have been received from — Dr. Acland; Dr. Sansom; Dr. Tilbury Fox, Paris; Dr. Denny; Mr. Skeet; Mr. Bailey, Coleshill; Mr. Tucker; Mr. Bean; Dr. Syson, Wash-upon-Dearne; Mr. Skey, Reading; Dr. Fairlem, Coupar; Dr. Dugenais, Montreal; Dr. Bower, Ramsgate; Mr. Cooper; Mr. White (with enclosure); Dr. Row (with enclosure); Dr. Baines (with enclosure); Dr. Holland, Matlock; Mr. Taylor, Collishall; Mr. Wheatley; Mr. Ashwell (with enclosure); Dr. Foster, Birmingham; Mr. Taylor, Portsmouth; Dr. Hearne; Mr. Parson, Godalming; Dr. Tibbits; Mr. Lownds, Walker; Mr. Shirley; Dr. Carter, Leamington; Mr. Whalley, Bradford; Mr. Atkinson; Mr. Hind; Dr. Blandford; Mr. Harrison, Liverpool; Mr. F. Churchill; Mr. Chevallier, Durham; Mr. Cordwent (with enclosure); Mr. Howard; Mr. Morgan; Mr. Shettle; Mr. Eskell; Mr. Tidy; Mr. Mason (with enclosure); Mr. Appleby; Dr. Humphrey; Mr. Morris, Campden; Dr. Pollock; Dr. Fearnside; Mr. Newland; Dr. Cassells; Mr. Leach; Dr. Roberts (with enclosure); Mr. Harrison; Mr. E. Armstrong; Mr. Loney; Mr. Massey; Mr. Stone; Mr. Marshall; Mr. Phelps; Mr. Prior; Dr. Mackenzie, Sidmouth; Mr. Fitzsimons, Kilkenny; Mr. Brietzcke; Mr. Cooke; Mr. V. Edwards; Mr. Kelly (with enclosure); Mr. Rackham; Mr. Jones, Harlech; Mr. Crofts; Dr. Mansfield, Plymouth; Mr. Morris, Kidderminster; Mr. Walls (with enclosure); Mr. Gay; Dr. Bree, Colchester; Dr. Batt; Mr. Cann, Dawlish; Mr. Pulman (with enclosure); Mr. Clarke; Mr. Younghusband; Mr. Southam, Manchester; Mr. Stafford; Mr. Eames; Mr. Fawthrop; Mr. Williams, Redruth; Mr. Cruice; Dr. Chuckerbutty; Mr. Johnston; Mr. Tuson; Mr. Brand; Mr. King; B. S. (with enclosure); Volunteer; X. Y. Z. (with enclosure); P. Y.; A Constant Reader, Landour; An Assistant-Surgeon; J. A. (with enclosure); H. C. (with enclosure); W. V.; M.D.; C. K.; Literatus; F. and H.; M.R.C.S.; T. H. R.; A. Z. A.; Vindex, India; P. R.; Scrutator; Bombay; A Reader; Perplexed; &c. &c.

THE *Jamaica Guardian* has been received.

Medical Diary of the Week.

Monday, Aug. 28.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM.—Operations, 1½ P.M.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

Tuesday, Aug. 29.

GUY'S HOSPITAL.—Operations, 1½ P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

Wednesday, Aug. 30.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.

LONDON HOSPITAL.—Operations, 2 P.M.

Thursday, Aug. 31.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 1 P.M.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

LONDON SURGICAL HOME.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

Friday, Sept. 1.

WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.

Saturday, Sept. 2.

ST. THOMAS'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.

ROYAL FREE HOSPITAL.—Operations, 1½ P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Hedges and Butler, Wine Mer-

CHANTS, &c., recommend and GUARANTEE the following WINES:—

SHERRY.

Good Dinner Wine, 24s., 30s., 36s. per dozen; fine pale, golden, and brown Sherry, 42s., 48s., 54s., 60s.; Amontillado, for invalids, 60s.

CHAMPAGNE.

Sparkling, 36s., 42s.; splendid Epernay, 48s., 60s.; pale and brown Sillery, 66s., 78s.; Veuve Clicquot's, Perrier and Jouet's, Moet and Chandon's, &c.

PORT.

For ordinary use, 24s., 30s., 36s., 42s.; fine old "Beeswing," 48s., 60s.; choice Port of the famed vintages 1847, 1840, 1834, 1820, at 72s. to 120s.

CLARET.

Good Bordeaux, 18s., 20s.; St. Julien, 24s., 30s., 36s.; La Rose, 42s.; Leoville, 48s.; Latour, 54s.; Margaux, 60s., 72s.; Lafitte, 72s., 84s., 96s.

BURGUNDY.

Macon and Beaune, 30s., 36s., 42s.; St. George, 42s.; Chambertin, 60s., 72s.; Côte Rôtie, 60s., 72s., 84s.; Corton, Nuits, Romanée, Clos-de-Vougeôt, &c.; Chablis, 24s., 30s., 36s., 42s., 48s.; Montrachet and St. Peray, sparkling Burgundy, &c.

HOCK.

Light Dinner Hock, 24s., 30s.; Nierstein, 36s., 42s.; Hochheimer, 48s., 60s., 72s.; Liebfraumilch, 60s., 72s.; Johannesberger and Steinberger, 72s., 84s., to 120s.

MOSELLE.

Still Moselle, 24s., 30s.; Zeltinger, 36s., 42s.; Brauneberger, 48s., 60s.; Muscatel, 60s., 72s.; Scharzberg, 72s., 84s.; sparkling Moselle, 48s., 60s., 66s., 78s.

Foreign Liqueurs of every description. On receipt of a post-office order, or reference, any quantity will be forwarded immediately, by

HEDGES and BUTLER.

London: 155, Regent-street, W.; and 30, King's-road, Brighton.

Originally Established 1667.

Thos. Nunn and Sons, Wine, Spirit,

and LIQUEUR MERCHANT, 21, Lamb's Conduit-street, call attention to their varied and extensive stock of SHERRIES (Pemartin's shipping):—Good sound Dinner Wine, 26s. and 32s. per dozen; Superior, 36s., 42s., 48s., and 52s.; Amontillado, 52s., 58s., and 64s. They also hold a choice stock of Old PORT WINE (chiefly Sandeman's shipping):—Well-matured Wines, 32s. and 36s.; ditto, with more age, 42s., 48s., and 54s.; 7 to 10 years in bottle, 60s., 66s., 72s., and 84s. CLARETS: good sound Bordeaux, 18s.; superior, 24s.; higher class, 32s. to 50s.; first growths, 56s. to 120s.; these are shipped by J. Violett and Co., Bordeaux. Rail paid to any station in England.

Established 1801.—Priced Lists on application.

Kinahan's LL Whisky

v. COGNAC BRANDY.

This celebrated old IRISH WHISKY rivals the finest French Brandy. It is pure, mild, mellow, delicious, and very wholesome. Sold in bottles, 3s. 9d., at the retail houses in London; by the agents in the principal towns in England; or wholesale, at 8, Great Windmill-street, W. Observe the red seal, pink label, and cork branded "Kinahan's LL Whisky."

Allsopp's Pale or Bitter Ale.—

Messrs. S. ALLSOPP and SONS beg to inform the Trade that they are now registering orders for the MARCH BREWINGS of their PALE ALE, in Casks of 18 gallons and upwards, at the Brewery, Burton-on-Trent, and at the undermentioned Branch Establishments:—

LONDON	At 61, King William-street, City.
BRIGHTON	At 6, Marine-parade.
LIVERPOOL	At Cook-street.
MANCHESTER	At Ducie-place.
DUDLEY	At Burnt Tree.
EDINBURGH	At Union-street-lane.
GLASGOW	At 115, St. Vincent-street.
DUBLIN	At 1, Crampton-quay.
CORK	At 25, Cook-street.
BIRMINGHAM	At Temple-street.
WOLVERHAMATON ...	At Exchange-street.
WORCESTER	At the Cross.
SOUTH WALES	At 13, King-street, Bristol.

Messrs. ALLSOPP and SONS take the opportunity of announcing to Private Families that their ALES, so strongly recommended by the Medical Profession, may be procured, in Draught and Bottles, Genuine from all the most respectable Wine and Beer Merchants and Licensed Victuallers on "Allsopp's Pale Ale" being specially asked for.

TONIC BITTERS.

Waters' Quinine Wine, the most

palatable and wholesome Bitter in existence.

An efficient Tonic, an unequalled Stomachic, and a gentle Stimulant. Sold by Grocers, Italian Warehousemen, Wine Merchants, Confectioners, and others, at 30s. a dozen.

Manufactured by WATERS & WILLIAMS, 2, Martin's-lane, Cannon-street, London.

Wholesale Agents, E. Lewis and Co., Worcester.

FOOD FOR INFANTS AND INVALIDS.

Bullock's Semola: a highly-nutritious

and very agreeable Food for Infants, Ladies who are Nursing, and Invalids suffering from any form of debility.

This Preparation recommends itself to the Profession by its uniform and known composition, and its accordance with established physiological principles. It consists of the staminal principle of Wheat (Gluten), denuded of starch as far as possible to leave an agreeable food, adapted for cooking.

In Tins, 1s., 2s. 6d., and 7s. 6d. each.

BULLOCK & REYNOLDS, Chemists, 3, Hanover-st., Hanover-sq., London.

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